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TRANSIENT TACHYCARDIA

PROGNOSTIC SIGNIFICANCE ALONE AND IN ASSOCIATION WITH TRANSIENT HYPERTENSION

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The rate of the heart varies widely in normal persons and may be increased temporarily by many different causes. Among them are excitement, exertion, pain, the ingestion of food, the drinking of coffee or tea and the smoking of tobacco. Acceleration is observed also in numerous states of disease, such as thyrotoxicosis, infection, shock and hemorrhage.

Transient tachycardia due to emotional disturbance, when the only sign of a disordered cardiovascular system, has not been considered clinically important. No careful analysis of this condition has been found in a survey of the literature. In monographs on diseases of the heart only casual mention is made of it. In the booklet on "Standards of Physical Examination During Mobilization" (MR 1-9), issued by the War Department on Oct. 15, 1942, it is specified that a heart will be considered normal when there is "a pulse rate of 100 or over which is not persistent and not due to paroxysmal tachycardia." However, a registrant is not acceptable who shows "a persistent heart rate of 100 or over when this is proved to be persistent in the recumbent posture and on observation and reexamination over a sufficient period of time." The same criteria are applied to candidates for admission to the United States Military Academy (Army Regulations 40-100, Nov. 16, 1942) and to those seeking a commission in the Regular Army, National Guard, Army of the United States and in the Organized Reserves (Army Regulations 40-105, Oct. 14, 1942).

Quite recently some 5,000 men disqualified for general military service for cardiovascular reasons were reexamined by groups of cardiologists in five large cities.[1] These examiners, using the Army standards, likewise were not impressed by the importance of a temporary increase in heart rate. In fact, in the report of this study the question was raised as to the advisability of extending the upper limit of the normal range, at rest, from 100 to 120 beats per minute. Because of the lack of specific information concerning the significance of transient tachycardia in terms of the subsequent history, the present analysis was undertaken.

MATERIAL, DEFINITIONS AND METHODS OF ANALYSIS

The same medical records of 22,741 Army officers, which served as the source of material for earlier papers in the series, were used in this investigation. The manner of collecting and preparing the data for statistical analysis has been described in previous publications.[2]

In this study, transient tachycardia has been the topic of central interest. In particular, its prognostic significance has been appraised, using as criteria the later development of sustained hypertension and of retirement and death with cardiovascular-renal diseases. The experience with transient tachycardia alone has been compared with the corresponding experience with transient hypertension alone, with the two conditions combined and with neither present. A brief note on sustained tachycardia has been included.

By transient tachycardia was meant a heart rate of 100 or over, of sinus origin, which was followed after rest, on any particular examination or at a later examination, by a rate under 100. The highest rate obtained during an examination was recorded. Tachycardia was considered to be sustained when a rate of 100 or over persisted, in the recumbent posture, throughout one examination or in a series of reexaminations made in the course of several days.

By transient hypertension was meant a reading over 150 mm. of mercury systolic or 90 diastolic which was followed, on any particular examination or at a later examination, by a reading below these levels. The highest systolic and diastolic readings obtained in any one of a series, taken at a given examination, were recorded. Sustained hypertension was taken to mean a reading of over 150 systolic or 90 diastolic, persisting throughout one examination, and not followed in subsequent examinations by lower levels.

This is the fourth in a series of papers dealing with "Studies of Blood Pressure in Army Officers."

Dr. John W. Fertig, professor of biostatistics, Columbia University College of Physicians and Surgeons, aided in the analysis and preparation of the material for final presentation.

The work described in this paper was done under a contract, recommended by the Committee on Medical Research, between the Office of Scientific Research and Development and Columbia University.

1. Levy, R. L.; Stroud, W. D., and White, P. D.: Report of Reexamination of 4,994 Men Disqualified for General Military Service Because of the Diagnosis of Cardiovascular Defects: A Combined Study Made by Special Medical Advisory Boards in Boston, Chicago, New York, Philadelphia and San Francisco, J. A. M. A. **123**: 937 (Dec. 11), 1029 (Dec. 18) 1943.

2. Hillman, C. C.; Levy, R. L.; Stroud, W. D., and White, P. D.: Studies of Blood Pressure in Army Officers: Observations Based on an Analysis of the Medical Records of 22,741 Officers of the United States Army, J. A. M. A. **125**: 699 (July 8) 1944. Levy, R. L.; White, P. D.; Stroud, W. D., and Hillman, C. C.: Transient Hypertension: The Relative Prognostic Importance of Various Systolic and Diastolic Levels, ibid. **128**: 1059 (Aug. 11) 1945. Levy, Hillman, Stroud and White.[3]

Cardiovascular-renal conditions, if present, were always included in the tabulation as causes of retirement or death, even though not directly responsible for either. Thus, an officer may have retired or died with such a disorder but not necessarily because of it.

As in the papers to which reference already has been made, the method of person-years was employed in the analysis of the data in order to obtain the proper base from which to calculate the various rates on the usual annual basis. Because the subjects remained in the study for varying periods of time, it was essential that their experience be properly evaluated from entrance into the study until retirement or death, or until the period covered by the study was terminated. Further, the experience of each individual was allocated to the proper age group, since the risks discussed vary with age.

It should be stressed that it is not the number of individuals in any group which forms the base for the calculation of the rates, but rather the units of exposure accumulated by them. In fact, the same person might, at different times, belong to different classification groups with respect to the presence or absence of transient hypertension or of transient tachycardia. Thus there were some who had neither condition throughout their stay in the study and so contributed all of their experience to the control group. Others began as controls and later developed transient tachycardia or transient hypertension. Their experience was appropriately allocated to the two corresponding groups. Still others began as controls, later developed one condition and still later developed the other. Their experience evidently was divided among three different categories. Thus, if a man aged 27, who began his experience as a control, developed transient hypertension at age 38 and transient tachycardia at age 46 and was retired for disability at age 56, he received eleven years' control experience in the proper age group, eight years' experience in the transient hypertension group and ten years' experience in the group with both conditions.

TABLE 1.—*Experience, in Person-Years, Until the Occurrence of Sustained Hypertension, by Age, According to the Presence or Absence of Transient Tachycardia and Transient Hypertension*

Age	Person-Years			
	Without Transient Tachycardia, Without Transient Hypertension	Without Transient Tachycardia, With Transient Hypertension	With Transient Tachycardia, Without Transient Hypertension	With Transient Tachycardia, With Transient Hypertension
25-29	30,065	1,711	1,186	410
30-34	33,161	3,587	1,686	808
35-39	33,125	5,892	2,210	1,358
40-44	29,162	7,762	2,449	2,029
45-49	21,612	8,095	2,174	2,265
50-54	12,325	6,390	1,432	1,778
55-59	5,766	4,050	746	1,198

TABLE 2.—*Rate of Developing Sustained Hypertension, Disability Retirement Rate and Death Rate with Cardiovascular-Renal Diseases, by Age, for Those Without Either Transient Tachycardia or Transient Hypertension (per Thousand Person-Years)*

Age	Rate of Developing Sustained Hypertension	Rate of Retirement with Cardiovascular-Renal Diseases	Death Rate with Cardiovascular-Renal Diseases
25-29	0.4	0.2	0.2
30-34	0.7	0.2	0.1
35-39	1.3	0.4	0.1
40-44	1.7	1.2	0.4
45-49	5.1	2.9	1.3
50-54	7.7	8.7	2.0
55-59	13.4	19.3	4.6

The base for calculating the rates of later development of sustained hypertension is somewhat smaller than that for retirements or for deaths, since the persons who developed sustained hypertension might remain in the study for some time before they retired or died, or before the study was terminated. Obviously, during this time they were not exposed again to the same risk. Although the difference in the number of person-years, because of this circumstance, was only about 5 per cent, it was considered worth while to take it into account in the analysis. The age distributions of person-years, shown in table 1, are appropriate only to calculating the rates of developing sustained hypertension. The appropriate distributions for rates of retirement and of death were, of course, also calculated but the figures are not reproduced here.

CONTROL GROUP

The Rates of Developing Sustained Hypertension, of Disability Retirement and of Death with Cardiovascular-Renal Diseases, by Age, for Those Without Either Transient Tachycardia or Transient Hypertension

TABLE 3.—*First Occurrence of Transient Tachycardia, by Age*

Age Periods	Number Under Observation Throughout Each Age Period	First Transient Tachycardia	Frequency, per Cent
25-29	3,069	115	3.7
30-34	4,526	201	4.4
35-39	5,900	300	5.1
40-44	5,684	319	5.6
45-49	4,019	240	6.0
50-54	2,575	169	6.6
55-59	1,362	79	5.8

(table 2).—It is apparent that in all three categories the rate increases with age. It is by using these rates as a base that the ratios given in tables 4, 5 and 6 are obtained.

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First Occurrence, by Age (table 3).—The frequency increases somewhat with age, up to 45; at this point a plateau apparently is reached. The first occurrence of transient hypertension, by age, shows a considerably higher frequency.[3] However, the curve of increase is similar, beginning with a frequency of 5.9 per cent in the age group 25-29 and reaching a plateau, with 18.6 per cent, at age 50.

Development of Sustained Hypertension, by Age, According to the Presence or Absence of Transient Tachycardia and Transient Hypertension (chart 1 and table 4).—The relative prognostic importance of transient tachycardia and transient hypertension, with respect to the later development of sustained hypertension, is clearly shown in the curves in chart 1. The lowest curve, representing the control group in which neither condition is present, shows a gradual increase in the rate with age. Both the group with transient tachycardia alone and the group with transient hyper-

3. Levy, R. L.; Hillman, C. C.; Stroud, W. D., and White, P. D.: Transient Hypertension: Its Significance in Terms of Later Development of Sustained Hypertension and Cardiovascular-Renal Diseases, J. A. M. A. **126**: 829 (Nov. 25) 1944.

tension alone show much higher rates, as indicated in the two succeeding curves. It is noteworthy that these two trends are approximately at the same level at all ages except 55-60.

The uppermost curve shows the rates for the group with both conditions present. It is in this group that

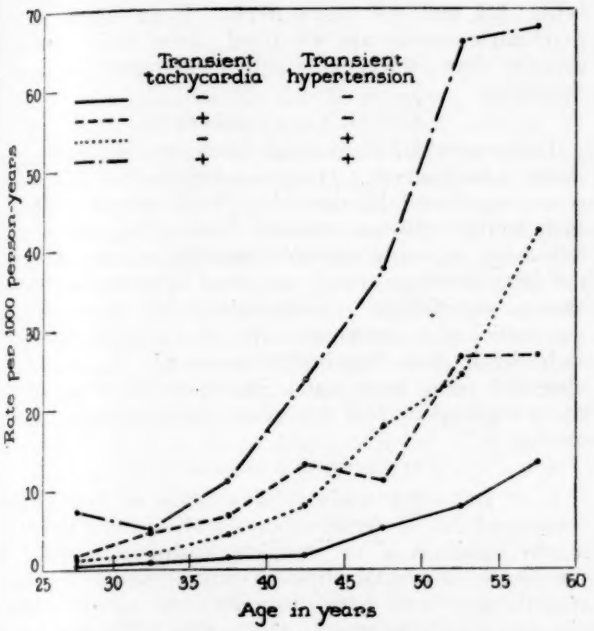

Chart 1.—Rates of developing sustained hypertension, by age, according to the presence or absence of transient tachycardia and transient hypertension.

TABLE 4.—*Total Observed Number of Cases of Sustained Hypertension According to the Presence or Absence of Transient Tachycardia and Transient Hypertension, and the Total Number Expected According to the Rates for the Group Without Either Condition*

	Without Transient Tachycardia		With Transient Tachycardia	
	Without Transient Hypertension	With Transient Hypertension	Without Transient Hypertension	With Transient Hypertension
Person-years	165,216	37,502	11,883	9,846
Cases of sustained hypertension				
Observed	409	569	139	353
Expected	409	168.6	40.7	47.1
Ratio	1.0	3.4	3.4	7.5

the incidence of later sustained hypertension is highest, the rates at the various ages being from five to eighteen times greater than the corresponding control rates.

The same facts are apparent in table 4, in which the ratios have been calculated by comparing the observed number of cases of later sustained hypertension with the number expected on the basis of the control rates at the various ages. The ratios for transient hypertension alone and transient tachycardia alone are identical, whereas the ratio for the group in which the two conditions are combined is more than twice as high.

Disability Retirements with Cardiovascular-Renal Diseases, by Age, According to the Presence or Absence of Transient Tachycardia and Transient Hypertension (chart 2 and table 5).—The same general trends are shown in chart 2 as were apparent in chart 1. There is a progressive increase in the rates for disability retirement with cardiovascular-renal diseases as age increases. Again the curves for the group with either condition alone are almost superimposed, and the curve for the group with both conditions present shows higher rates throughout.

The ratios obtained by comparing the observed with the expected number of cases (table 5) bring out again the equal importance of transient tachycardia and transient hypertension. When these conditions are combined, the ratio is about 50 per cent greater than when either condition is present alone.

Deaths with Cardiovascular-Renal Diseases, by Age, According to the Presence or Absence of Transient Tachycardia and Transient Hypertension (chart 3 and table 6).—The death rate with cardiovascular-renal diseases for the group with transient tachycardia alone is not conspicuously higher than for the control group,

TABLE 5.—*Total Observed Number of Disability Retirements with Cardiovascular-Renal Diseases According to Presence or Absence of Transient Tachycardia and Transient Hypertension, and the Total Number Expected According to the Rates for the Group Without Either Condition*

	Without Transient Tachycardia		With Transient Tachycardia	
	Without Transient Hypertension	With Transient Hypertension	Without Transient Hypertension	With Transient Hypertension
Person-Years	166,844	39,207	12,429	10,786
Retirements with cardiovascular-renal diseases				
Observed	353	349	83	169
Expected	353	186.1	41.6	56.1
Ratio	1.0	1.9	2.0	3.0

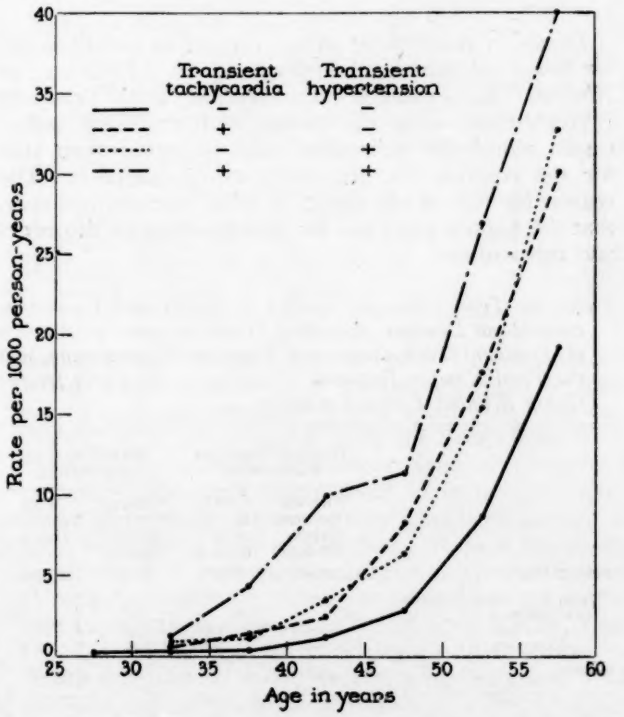

Chart 2.—Disability retirement rates with cardiovascular-renal diseases, by age, according to the presence or absence of transient tachycardia and transient hypertension.

except at age 55 and over. This is in contrast to the group with transient hypertension alone, in which the rates are decidedly higher at all ages. The explanation for this difference is not evident. Where both conditions are present, the rates are distinctly increased.

The same facts are apparent in table 6. The ratio for the group with transient tachycardia alone is not significant. However, for the group with transient hypertension alone the ratio is significant. When both conditions are present the ratio is greater than when either is present alone, although not significantly so.

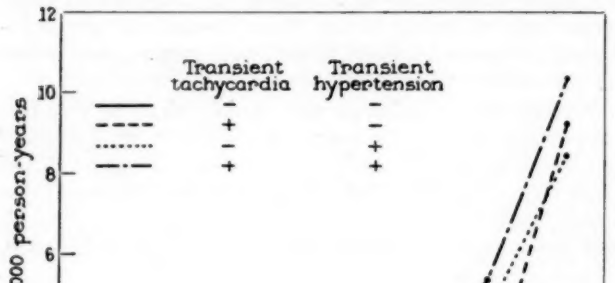

Chart 3.—Death rates with cardiovascular-renal diseases, by age, according to the presence or absence of transient tachycardia and transient hypertension. (No deaths occurred in the age group 40-44, in the category with transient tachycardia alone. The first portion of this curve is drawn lightly to indicate that its direction between the two connecting points is unknown).

It should be noted that the total number of deaths involved is relatively small.

Disability Retirement Rates, Excluding Cardiovascular-Renal Diseases, According to the Presence or Absence of Transient Tachycardia and Transient Hypertension.—For the group with transient tachycardia alone, the retirement rate is higher than that for the controls for practically every diagnosis. The reason for this is not clear. It is of interest, however, that the highest rates are for neuropsychiatric disorders and tuberculosis.

TABLE 6.—*Total Observed Number of Deaths with Cardiovascular-Renal Diseases According to the Presence or Absence of Transient Tachycardia and Transient Hypertension, and the Total Number Expected According to the Rates for the Group Without Either Condition*

	Without Transient Tachycardia		With Transient Tachycardia	
	Without Transient Hypertension	With Transient Hypertension	Without Transient Hypertension	With Transient Hypertension
Person-Years	106,844	39,207	12,429	10,786
Deaths with cardiovascular-renal diseases				
Observed	106	106	15	37
Expected	106	50.2	11.7	15.0
Ratio	1.0	2.1	1.3	2.5

In the group with transient hypertension alone, the ratio with respect to the control rates is 1.1, which is not significant. However, when transient tachycardia is present, either alone or with transient hypertension, the ratios are significant, being 2.1 and 1.3 respectively. The latter ratio is considerably smaller, however, than that observed for retirements with cardiovascular-renal diseases.

Deaths, Excluding Cardiovascular-Renal Diseases, According to the Presence or Absence of Transient Tachycardia and Transient Hypertension.—The ratio for the group with transient tachycardia alone, which is 1.2, is not quite significant. The ratios for the group with transient hypertension alone and for the group with the two conditions combined are both significant, being 1.3 and 1.4 respectively. Even when neuropsychiatric causes are excluded, these ratios are still greater than unity, although no longer statistically significant.

SUSTAINED TACHYCARDIA

There were 327 individuals in whom sustained tachycardia was observed. Their experience after this occurrence was small because they were retired relatively early in their military careers. The average duration of follow-up was only eighteen months, so that rates for the later development of sustained hypertension would have no significance. On the other hand, the experience was sufficient to determine rates of disability retirement and death with cardiovascular-renal diseases. The observed rates were much in excess of those of the control group and of the group with transient tachycardia.

SUMMARY AND CONCLUSIONS

1. A statistical analysis was made of the medical records of 22,741 Army officers to determine the prognostic significance of transient tachycardia noted in the course of annual physical examinations. The same records were used which furnished the source of material for earlier papers in this series. The method of person-years was employed in the analysis.

2. The indexes chosen to demonstrate the influence of transient tachycardia on the subsequent state of health and cause of death were the later development of sustained hypertension, and disability retirement and death rates with cardiovascular-renal diseases.

3. The frequency of transient tachycardia increased somewhat with age, up to 45; at this point a plateau apparently was reached. The frequency was considerably less than that found for transient hypertension.

4. The group with transient tachycardia showed higher rates for later sustained hypertension and for retirement with cardiovascular-renal diseases than did the control group. The rates were similar to those for the group with transient hypertension.

5. In the group with transient tachycardia, the death rate with cardiovascular-renal diseases was not significantly greater than in the controls. This was in contrast to the group with transient hypertension, in which a significant increase was demonstrated. The reason for this difference was not evident.

6. When both transient tachycardia and transient hypertension were present, the incidence of later sustained hypertension was more than twice as great as when either condition was present alone. The incidence of retirements and deaths with cardiovascular-renal diseases was also higher, but to a less pronounced degree.

7. In a small group with sustained tachycardia, the rates of retirement and death with cardiovascular-renal diseases were far in excess of those of any other group considered.

8. Transient tachycardia due to emotional disturbance or some other cause not discernible, like transient hypertension of similar origin, is often a precursor of hypertensive vascular disease. In this respect the two conditions are of equal importance.

LOCAL USE OF PENICILLIN IN INFECTIONS OF THE EAR, NOSE AND THROAT

RESULTS OF TREATMENT

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In order to evaluate the local use of penicillin in infections of the ear, nose and throat, a study of a group of patients was begun in February 1945 for the purpose of taking advantage of the seasonal peak in the incidence of upper respiratory infections. The study continued for three months. During this period approximately 500 patients were treated. Of this group the case records were complete enough in 339 to be used for statistical purposes. Cultures were obtained in 403 patients, and these results are also tabulated.

Although the exciting cause of acute rhinitis (the common cold) is generally accepted to be a virus, its effects are relatively transient. It is the activation of a host of pathogenic pyogenic organisms by the virus which produces the many local and remote pathologic processes which constitutes the main problem in the management of upper respiratory infections. Fortunately, the majority of these secondary as well as primary invaders are susceptible to penicillin, and since the drug can be applied topically in most instances in adequate concentrations to be effective, infections of the ear, nose and throat and adjacent structures offer an ideal field for the study of this antibiotic agent. None of these patients received penicillin in any way other than locally, and none received any other chemotherapeutic agent. Only commonly employed symptomatic and supportive measures were used in conjunction with the local use of penicillin.

After study of the meager literature and discussion, it was decided to employ

1. Solutions of 500 units per cubic centimeter of the sodium salt in isotonic solution of sodium chloride as a spray and by drop, since stronger solutions might be irritating and weaker ones were apt to become too dilute after mixing with retained body secretions.

2. A base of a water soluble jelly whose p_H would not inactivate the penicillin or disturb the nasal mucosa, 1,000 units per gram.

3. Lozenges of an inert base such as lactose, 800 units per lozenge.

Methods of application were:

For the ear: Instillation of 5 to 6 drops every two hours during the waking period, allowing the drug to remain in the external canal of the upturned ear for five to fifteen minutes. In some instances gentle, positive pressure was used to force the solution through the tympanum and eustachian tube.

For the nose: The spray was used every one or two hours during the waking period for two days, then every three to four hours for two days. The jelly was instilled into the nose at bedtime in some instances.

For the sinuses: If lavage was indicated, isotonic solution of sodium chloride was employed and 2 to 5 cc. of the solution or water soluble base jelly was instilled through the cannula at the completion of the irrigation.

For the throat: Lozenges were allowed to dissolve slowly on the tongue every one or two hours. In many instances the nasopharynx and pharynx were sprayed with the solution at the same time, either transnasally or transorally.

For the mouth and gums: The lozenges alone were used.

All material was kept under refrigeration until given to the patient, and repeated bacteriologic testing showed no deterioration in the product while under refrigeration and no deterioration at room temperature within the period it was to be used by the patient. The amounts dispensed were solutions in 30 cc. bottles, lozenges in vials of twelve and water soluble jelly in collapsible tubes of 16 Gm. For office use the solution and jelly were kept under refrigeration in sterile rubber-capped bottles.

RESULTS

Acute Rhinitis.—Since acute rhinitis (the common cold) is the activator of most infections in this field, a small group of patients were selected who were seen during the prodromal or early phase of the disease and whose critical evaluation of the remedy could be relied on. The results obtained in this small group are considered to be encouraging, since the great majority of them (36) believed themselves definitely improved, against 4 who were unimproved in forty-eight hours. None of these 36 developed any complications and all were well within four to five days. It must be remembered that it is important to differentiate an early acute rhinitis from allergic rhinitis and the initial coryza of certain infectious diseases. This differentiation is not always easy in the early phases of these disorders. Acute rhinitis also varies widely in intensity and duration of symptoms, and the psychologic effect of a new drug must also be evaluated in one's conclusions. Hence, until penicillin becomes plentiful enough to treat large groups in army camps and industrial organizations, it cannot be said that topical application in the early phase of acute rhinitis will or will not be of value.

TABLE 1.—*Rhinitis*

Acute Rhinitis (Common Cold)	
Method of Application: Nasal Spray	
Improved	36 within 48 hours
Unimproved	4 within 48 hours
Subacute Rhinitis (Sphenoethmoiditis)	
Method of Application: Nasal Spray	
Improved	32 within 48 hours
Unimproved	7 within 48 hours

TABLE A.—*Subacute Rhinitis (Sphenoethmoiditis)*

	Occurrences	
	Number	Per Cent
31 cases		
1. Staphylococcus aureus hemolyticus	26	28.6
2. Streptococcus viridans (alpha)	11	12.2
3. Neisseria catarrhalis	10	11.1
4. Streptococcus (beta)	9	10.0
5. Pneumococcus—all types	9	6.7
6. Streptococcus nonhemolyticus (gamma)	6	6.7
7. Staphylococcus aureus (nonhemolytic)	5	5.6
8. Pseudomonas pyocyaneus	5	5.6
9. Hemophilus influenzae	4	4.5
10. Corynebacterium hoffmanni	4	4.5
11. Corynebacterium diphtheriae	3	3.4
12. Klebsiella pneumoniae (B. friedländer)	1	1.1

Sphenoethmoiditis. — Under this category were grouped those patients in whom the nasal symptoms of a stuffy nose and postnasal discharge, along with

From the Department of Otolaryngology, University of Virginia Hospital.
The lozenges were prepared by the Hynson, Westcott & Dunning Company, Baltimore.
Paper published under the auspices of the Section on Laryngology, Otology and Rhinology.
The penicillin used in this study was furnished by the Commercial Solvents Corporation, Terre Haute, Ind.
The bacteriologic studies were conducted in the Clinical Laboratory, University of Virginia Hospital, under the direction of Dr. W. E. Bray.

various other commonly related symptoms, persisted after the acute phase of the infection had passed. These symptoms usually persist for three to six weeks before resolution and may be caused by unusual virulence of the organisms, poor body resistance from any cause or certain deformities of the nasal passages producing mechanical obstruction to proper aeration and drainage. Any one or combination of the foregoing tends toward chronicity of the infection. Of the 39 patients in this group, 32 were improved in forty-eight hours and 7 were unimproved.

In order for penicillin to be effective, we must be able to apply it frequently in adequate concentration to the diseased area, so nasal congestion must be relieved intermittently by a spray of 1 per cent ephedrine in isotonic solution of sodium chloride or 0.25 per cent neosynephrin solution. The patient was instructed to spray the nose with the vasoconstrictor solution three times at three minute intervals every three or four

TABLE 2.—*Chronic Sphenoethmoiditis*

Method of Application: Nasal Spray	
Improved	7 within 4-5 days
Unimproved	13 within 4-5 days
Proetz Displacement	
Improved	5 within 8 days
Unimproved	4 within 8 days

TABLE 3.—*Maxillary Sinusitis*

Acute Maxillary Sinusitis	
Method of Application: Injection After Lavage	
Well	64 patients average irrigations 2.7
Improved	6 patients average irrigations 4.5
Unimproved	3 patients average irrigations 4.9
Chronic Maxillary Sinusitis	
Method of Application: Injection After Lavage	
Unimproved	8 patients average irrigations 10

hours, if necessary. In cases in which there is obstruction to aeration and drainage by deformities of the nasal septum or turbinates or in which the infecting organism is penicillin resistant, one cannot expect improvement.

Sphenoethmoiditis, Chronic.—In this category were grouped those patients in whom the postnasal discharge had persisted for a longer time. Associated symptoms were nasal stuffiness, occasional headache, cough, sore throat and hoarseness. Pathologic changes characterized by hyperplasia of the nasal mucosa, proliferation of lymphoid tissue in the nasopharynx and pharynx, and mild lymphedema were frequently noted; likewise, nasal obstruction to aeration and drainage from deformities of the nasal septum and turbinates was often present. The other sinuses in this group were not involved.

The results in a small group of 20 patients were 7 improved in four to five days, 13 unimproved. In an effort to secure a more intimate contact of the penicillin solution to this area, 9 patients were treated daily by the Proetz displacement method. Of this number 5 were improved in eight days, and 4 were unimproved. Persistence in this method should be of value in suitable cases. But for reasons just stated, one should not expect a too favorable response in this group.

Acute Maxillary Sinusitis.—The most frequent complication of nasal infection which calls for active surgical intervention is empyema of the maxillary sinus. It has been our custom for some years to irrigate the maxillary sinus every second or third day with a cannula introduced through one of the natural ostiums, or pars membranacea, using isotonic solution of sodium chloride, whenever this condition is recognized. This procedure is painless, hastens resolution and does not

TABLE B.—*Acute Pharyngitis and Nasopharyngitis*

24 cases	Occurrences: Number	Occurrences: Per Cent
1. Streptococcus viridans (alpha)	18	23.9
2. Streptococcus pyogenes (beta)	13	17.4
3. Streptococcus nonhemolyticus (gamma)	9	12.0
4. Staphylococcus aureus hemolyticus	9	12.0
5. Staphylococcus aureus (nonhemolytic)	8	10.7
6. Neisseria catarrhalis	7	9.3
7. Vincent's organisms	6	8.0
8. Pseudomonas pyocyaneus	3	4.0
9. Corynebacterium diphtheriae	2	2.7

interfere with the normal physiologic response of the nasal or sinus mucosa. As a result of this experience, resolution could formerly be expected in fourteen to twenty-one days.

Since this sinus is so readily accessible and so frequently involved, it offered an excellent opportunity to test the effects of penicillin when injected after the completion of the lavage. For this purpose 2 to 5 cc. of the solution or 2 to 5 cc. of the water soluble base jelly was used. As a result, of 73 patients so treated, 64 were well after an average of 2.7 irrigations, 6 were improved after 4 to 5 irrigations, and 3 were unimproved after 4 to 9 irrigations. In the 64 patients who were well after 2.7 irrigations, the time interval was six to eight days, a very definite decrease in the time interval and number of irrigations. No further reduction in time should be expected, since six to eight days are necessary for the body defenses to be mobilized and for reversal of the pathologic changes. The fact that penicillin is effective in the presence of pus gives it precedence over the sulfonamide drugs in this condition.

TABLE 4.—*Pharyngitis and Tonsillitis*

Acute Pharyngitis and Nasopharyngitis	
Method of Application: Nasal Spray, Lozenges	
Improved	27 within 48 hours; 3 relapsed
Unimproved	4 within 48 hours
Acute Tonsillitis	
Method of Application: Lozenges	
Improved	7 within 48 hours
Unimproved	2 within 48 hours
Oral Spray	
Improved	9 within 48 hours
Unimproved	4 within 48 hours
Subacute Tonsillitis	
Method of Application: Lozenges	
Improved	5 within 3 days
Relapsed	1 after 5 days

Chronic Maxillary Sinusitis.—The same procedure was carried out in 8 patients with chronic maxillary sinusitis. None were improved after 10 irrigations. This result was not unexpected, for the pathologic changes here were irreversible and surgery is required. However, we have found that healing is promoted after operation by instillation of a penicillin solution.

Acute Pharyngitis and Nasopharyngitis.—The acute sore throat is a common disorder and, although usually self limited, serious complications are always imminent.

The infectious process tends to spread rapidly over the mucous membrane, and in many instances the process is more severe in the nasopharynx than in the pharynx, although the symptoms are mainly pharyngeal because of the mobility of the tissues. The nasopharynx should always be inspected under these conditions.

Both lozenges and the spray were used, and if the patient was unable to spray the nasopharynx transorally he was instructed to use the nasal route. Of the 31 patients in this group, 27 were improved in forty-eight hours, 3 of whom relapsed and the treatment had to be started again; 4 were unimproved.

It must be remembered here that many persistent sore throats with regional adenitis and elevated temperature are probably of virus origin, infectious mononucleosis being an example of this type. None of these disorders would be affected by penicillin. However, in a few instances of infectious mononucleosis in which there was a pronounced ulcerative pharyngitis the

TABLE C.—*Acute Maxillary Sinusitis*

	Occurrences	
	Number	Per Cent
33 cases		
1. Staphylococcus aureus hemolyticus	15	23.4
2. Staphylococcus aureus (nonhemolytic)	11	18.9
3. Streptococcus pyogenes (beta)	8	12.9
4. Streptococcus viridans (alpha)	8	12.9
5. Pneumococcus—all types	7	10.7
6. Aerobacter aerogenes	5	7.8
7. Hemophilus influenzae	3	4.4
8. Neisseria catarrhalis	2	3.6
9. Meningococcus meningitidis group 2	1	1.8
10. Pneumococcus—could not type	1	1.8

TABLE D.—*Acute Tonsillitis*

	Occurrences	
	Number	Per Cent
25 cases		
1. Streptococcus pyogenes (beta)	20	35.6
2. Streptococcus viridans (alpha)	12	21.3
3. Neisseria catarrhalis	9	16.2
4. Staphylococcus aureus hemolyticus	6	10.8
5. Streptococcus (gamma)	4	7.1
6. Staphylococcus aureus (nonhemolyticus)	3	5.4
7. Pneumococcus—all types	2	3.6

topical application did seem to control the secondary invaders and hasten healing of the pharyngeal and nasopharyngeal lesion.

Acute Tonsillitis.—Lozenges alone were used for 9 patients; 7 improved within forty-eight hours, and 2 were unimproved. The oral spray was used for 13 patients; 9 were improved in forty-eight hours, and 4 were unimproved. For subacute tonsillitis 6 patients were treated by lozenges alone. Of this small group 5 were improved in three days and 1 was unimproved. Acute tonsillitis is also a self limited disease, as a rule, but the toxemia is severe and complications are not uncommon. The treatment with penicillin is simple and seems to be effective.

Otitis Media, Purulent Acute.—The great majority of acute otitic infections are due to penicillin susceptible organisms, but there is no safe nor practical way to apply the drug to the mucosa of this area. However, 31 patients were treated by the use of drops and in a few instances by gentle positive pressure irrigation; 18 were improved in five to seven days and 13 were unimproved, which is approximately the result one would have obtained without any treatment. The results of systemic treatment by the sulfonamides and penicillin so far overshadow any other method of therapy that the use of penicillin locally is unnecessary and futile.

Otitis Media, Purulent Chronic.—If the causative infection is due to penicillin susceptible organisms and there is a large tympanic perforation, without pseudocholesteatoma or osteitis, then local treatment may be employed. Instillation of drops was used for 34 such patients; 18 were improved in seven days, and 16 were

TABLE 5.—*Otitis Media*

Purulent Acute Otitis Media

Method of Application: Ear Drops

Improved.....18 within 5-7 days
Unimproved.....13 within 5-7 days

Purulent Chronic Otitis Media

Method of Application: Ear Drops

Improved.....18 within 7 days
Unimproved.....16 within 7 days

TABLE 6.—*Postoperative Radical Mastoid Cavities*

Method of Application: Ear Drops

Improved.....13 within 7 days
Unimproved..... 5 within 7 days

unimproved in seven days. Under these conditions we feel we are justified in trying local treatment. One of the most gratifying yet unexpected results in this group of patients was the disappearance of the odor. Since the odor is due, as a rule, to penicillin resistant organisms, one can only conjecture as to the reason for this unexpected result. In several cases due to gram positive cocci, it was noted that following treatment these organisms disappeared and their place was taken by one or more of the gram negative bacilli. This

TABLE E.—*Purulent Acute Otitis Media*

	Occurrences	
	Number	Per Cent
24 cases		
1. Staphylococcus aureus hemolyticus	23	32.2
2. Streptococcus pyogenes (beta)	13	18.2
3. Pneumococcus—all types	9	12.7
4. Streptococcus nonhemolyticus (gamma)	7	9.9
5. Streptococcus viridans (alpha)	5	7.0
6. Staphylococcus aureus (nonhemolytic)	5	7.0
7. Neisseria catarrhalis	4	5.6
8. Pseudomonas pyocyaneus	3	4.2
9. Corynebacterium diphtheriae	2	2.8

TABLE F.—*Purulent Chronic Otitis Media*

	Occurrences	
	Number	Per Cent
25 cases		
1. Staphylococcus aureus hemolyticus	12	24
2. Streptococcus pyogenes (beta)	8	16
3. Pseudomonas pyocyaneus	6	12
4. Bacillus proteus (Proteus vulgaris)	5	10
5. Streptococcus nonhemolyticus (gamma)	4	8
6. Aerobacter aerogenes	4	8
7. Neisseria catarrhalis	3	6
8. Staphylococcus aureus (nonhemolytic)	3	6
9. Pneumococcus—all types	3	6
10. Escherichia coli	2	4

change of flora did not mean the cessation of drainage and clinical cure but oftentimes an even more intractable infection.

Postoperative Radical Mastoid Cavities.—Following radical mastoidectomy, we used the drops locally for 18 patients. Within seven days 13 were improved and 5 were unimproved. In some instances a catheter was sewed into the depths of the wound through the incision and connected with a 50 cc. syringe fastened to

the bed post. A closed method of irrigation was thereby established. These wounds all remained clean as long as this procedure was maintained. When the patient was allowed out of bed after four to five days, the tube was withdrawn and the local instillation of drops was started. The cases listed as improved were those in which there was but little infection, and healing was rapid. Reinfection in old, healed, radical cavities usually respond quite well to the same treatment, provided the organisms are susceptible.

Vincent's Gingivitis and Angina.—A small group of 8 patients with proved Vincent's infection of the gingiva, mouth or pharynx were treated by the frequent use of the lozenge. All were improved in three to five days. One of the most gratifying findings here was in those cases of gingivostomatitis in which the severe symptoms were promptly alleviated, the patient being able to eat fairly comfortably in twenty-four hours. Proper medical and surgical treatment was, of course, also employed.

Toxic or Allergic Reactions.—No systemic toxic nor allergic reactions were noted in this series. However, in 6 patients under treatment for otitic infections, a pronounced dermatitis of the auditory canal and auricle occurred, and treatment had to be discontinued. Whether this reaction was due to local sensitization

TABLE 7.—*Vincent's Gingivitis and Angina*

Method of Application: Lozenges	
Improved	8 within 3-5 days

or to the release of certain penicillin resistant organisms whose activity had formerly been held in abeyance was undetermined.

CONCLUSION

The local use of penicillin has proved helpful in the control of acute and subacute infections of the nose, sinuses, nasopharynx, pharynx and mouth and of occasional benefit in certain cases of chronic otitis media. It has also proved beneficial postoperatively in mastoid and sinus surgery.

It has been of no value in acute otitis media and of no or negligible value in chronic sinusitis and chronic sinusitis associated with allergic rhinitis.

Its usefulness in the treatment of the common cold is still undetermined.

In those cases in which it has proved beneficial, its effect will no doubt be enhanced by its combined use systemically or by the combined use of an appropriate sulfonamide.

Local application does not produce any dramatic change in the bacterial flora present in the nose and throat. Its effect seems to be more bacteriostatic in nature than bactericidal. In several patients who had recently recovered from scarlet fever, we were unable to alter the bacterial flora on repeated cultures, after local treatment.

The solution, 500 units per cubic centimeter, and the lozenge provide the simplest and most effective means of application. The water soluble jelly was useful at times for instillation into the nose at bedtime and in the treatment of atrophic rhinitis, in which the nasal symptoms were ameliorated.

We are hopeful that new antibiotics will soon be available, particularly for the gram negative organisms and for the more common bacteria which have become sulfonamide or penicillin resistant.

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ABSTRACT OF DISCUSSION

DR. ARTHUR W. PROETZ, St. Louis: This careful study and cautious evaluation of the local effects of penicillin goes far to clarify the problem and should prevent useless medication. A new therapeutic agent should be studied by capable observers under scientific conditions and with adequate controls rather than be turned loose on practicing physicians, who, honest though they may be, are untrained in scientific methods and flood the literature with unimportant communications. By the time the effect of these misleading opinions has been brushed away months have passed and tons of useless medicaments have been administered. My own experience with penicillin, much less extensive than that of Dr. Woodward and Dr. Holt, is limited to its effect on the nose. It would suggest that penicillin may be of some minor help in the control of acute and subacute infections of the nose. I am not at all convinced either by my own observations or by those in the present paper that this therapeutic value is any greater than that of half a dozen other agents at hand. The common cold, for example, should improve under almost any treatment within the thirty-six to forty-eight hours stipulated in table 1; a small number will improve without any treatment in that time. The results of my own introduction of penicillin solution (250 units per cubic centimeter) were disappointing, as were those of Dr. Woodward. Almost any of the commonly used solutions should produce some improvement in a chronic sphenoethmoiditis within eight days. Whether this is permanent or not depends on the nature of the pathologic process in the sinus and not on the irrigating solution. The concentration of 250 units per cubic centimeter in my own cases was determined by my previous observations in the laboratory that stronger solutions had some slight detrimental effect on the ciliary activity. The effects of the local application of penicillin on the upper respiratory tract closely resemble those of a great number of other topical applications.

DR. O. E. VAN ALYEA, Chicago: The authors recognize that to be effective penicillin must be of sufficient concentration and in constant contact with the infected tissues for a considerable time. This no doubt accounts for the very good results obtained in their cases of pharyngitis and tonsillitis with the constant use of lozenges augmented with nasal and pharyngeal sprays. Penicillin was shown to be less effective in treatment of nasal and sinus infections, and this is easily understood when it is realized that no medicament remains long in contact with the ciliated mucosa of the nose and sinus because of the protective nature of the mucous film which lines these cavities and the action of the cilia, which quickly propels foreign material to the sinus outlets and to the nasopharynx. The authors found the penicillin drops to be of little value in the treatment of acute otitic infections. Although 18 of the 31 cases showed improvement in seven days, similar or better results have been attained by the use of other cleansing agents. In the chronic suppurative ear cases the use of the drops was also disappointing but was found to be of distinct value in eliminating the odor from the discharge. Following mastoid surgery, penicillin instilled by way of a catheter kept in the wound maintains a clean field and in that respect is of distinct value.

DR. C. H. MCCASKEY, Indianapolis: Considering the fact that penicillin is practically a new drug and that the time was so short in which the authors had to carry on their experiments, and especially with the small amount of work that had been done by other investigators, these doctors had to depend entirely on their own findings and methods of procedure. Some of the important points which they made in this discussion are as follows: 1. They attempted to keep a fairly normal p_H for their spray solution, which is important in any solution used as a nasal spray. 2. They advised adequate doses and the frequent use of their solution in nasal infections. 3. They pointed out that in acute purulent maxillary sinusitis the drug was effective but that in chronic maxillary sinusitis the results were not good. 4. They brought out the point that in virus infections the drug was not of much value but that in many of the secondary infections following virus infections it was valuable. 5. They stated that their results in acute and chronic purulent otitis media were not of great value. My experience with penicillin in infections of the ear, nose and throat has been limited.

ARTHRITIS RESEMBLING REITER'S SYNDROME

OBSERVATIONS ON TWENTY-FIVE CASES

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At Ashburn General Hospital, a center designated by the Army for the treatment of arthritis, we have had the opportunity of seeing many unusual manifestations of rheumatic disease. We have been impressed by the apparent frequency of a syndrome characterized by arthritis, nonspecific urethritis and often conjunctivitis. Because of the sparsity of previous clinical reports, we believe it advisable to report our preliminary observations.

In 1916 Reiter [1] described a clinical syndrome with these characteristics. Since that time only 50 cases in twenty-six communications have been reported, and only a few of these reports have appeared in American journals.[2] It is noteworthy that 22 of the reported cases have occurred in soldiers on active duty in World Wars I and II.

Various organisms, including a spirochete, a staphylococcus, an enterococcus and a filtrable virus, have been suggested as causal agents, but none have been confirmed, and the symptom complex still remains a syndrome of undetermined etiology. In 1942 Bauer and Engelman,[3] in reporting 6 cases, described the results of a biopsy of synovial membrane in 1 case and reported findings suggestive of infectious disease, but distinct either from the ordinary specific infectious arthritides or from rheumatoid arthritis. Other reports have disclosed that the entire triad has not always been present, and, in some, other symptoms including diarrhea, balanitis and nongonorrheal keratoderma have occurred.[4]

Our series consists of 25 cases, in 11 of which the triad of arthritis with an acute onset, purulent urethritis and suppurative conjunctivitis occurred. The remaining 14 cases presented an identical clinical pattern except that the conjunctivitis was absent. For the sake of comparison and discussion, those with the entire triad are listed as "typical" (group 1) and the others as "atypical" (group 2).

The patients came from all branches of the Army, and the disease appeared in camps in the United States as well as in all the major theaters of operation. Necessarily many of our observations include those recorded at other military installations. There were 9 officers in the series. Ages varied from 18 to 37 years, with an average of 26 years. Although many of our patients are nurses, Red Cross workers and members of the WAC, no case resembling this syndrome was observed in the female sex. Only 2 patients gave a positive family history of rheumatic disease. None gave a history of previous joint disease other than a few cases of definite traumatic arthritis. None of the patients in group 1 admitted sexual exposure within one month preceding the onset. Five patients in group 2 gave such a history. The results of other observations are given in the table.

Urethritis was the initial symptom in 19 cases, arthritis in 2 and diarrhea in 4. The time required for the complete clinical picture to develop varied from two to forty-two days, with an average of fifteen days. In those cases in which arthritis was the initial symptom urethritis developed within three days.

The urethritis was purulent in nature. Repeated smears and cultures of the discharge were negative for gonococci. The urethritis did not appear to be influenced significantly by adequate doses of the sulfonamides (23 cases) or penicillin (19 cases) in doses of 100,000 to 3,000,000 units. In practically all cases, however, it disappeared eventually, but recurrences were noted in a few. In 4 cases a residual prostatitis was noted. In these, culture of the prostatic secretion on selective mediums showed either no growth or Staphylococcus albus.

Comparison of Cases With and Without Conjunctivitis

	Group 1	Group 2	Total
Cases	11	14	25
Remote history of gonorrhea	4	3	7
Sexual exposure	0	5	5
Initial Symptom:			
Urethritis	8	11	19
Diarrhea	2	2	4
Arthritis	1	1	2
Average days between initial symptom and complete syndrome	14	16	
Joint involvement:			
Symmetrical	5	5	10
Asymmetrical	6	9	15
Diarrhea	2	4	6
Penile lesion	4	4	8
X-Ray changes	7	11	18

Eight cases showed a balanitis or perimeatal ulceration. Dark field examinations in these cases were consistently negative. A recurrence of balanitis was noted in 2 cases.

A mild diarrhea of short duration was the initial symptom in 4 cases and was concomitant with the arthritis in 2 others. Stool examinations and cultures revealed no specific organisms.

Purulent conjunctivitis developed either just before or shortly after the onset of the arthritis in 11 cases. This was usually mild and disappeared as promptly on symptomatic therapy alone as when a sulfonamide or penicillin was administered. It lasted from two days to three weeks, an average duration of four days. Cultures of the discharge were either sterile or showed a scant growth of Staphylococcus albus.

Concurrent with the acute phase of the syndrome, circinate lesions developed on the penis in 1 case and keratotic lesions on the legs and feet. The penile lesions were typical of balanitis circinata. The skin lesions were characteristic of keratodermia blennorrhagica and lasted two months. In another case subungual abscesses appeared in six of the fingers.

From the Rheumatic Disease Section of Ashburn General Hospital, McKinney, Texas.

Read before the annual meeting of the New York Rheumatism Association, May 9, 1945.

1. Reiter, H.: Ueber eine bisher unerkannte Spirochäteninfektion (Spirochaetosis arthritica), Deutsche med. Wchnschr. **42**: 1535, 1916.

2. Frühwald, R.: So-Called Spirochaetosis Arthritica, Urol. & Cutan. Rev. **32**: 7, 1928. Colby, F.: Renal Complications of Reiter's Disease, J. Urol. **52**: 415, 1944. Rosenblum, H. H.: So-Called Reiter's Disease, U. S. Nav. M. Bull. **44**: 375, 1945. Lever and Crawford.[4]

3. Bauer, W. W., and Engelman, E. P.: A Syndrome of Unknown Etiology Characterized by Urethritis, Conjunctivitis and Arthritis (So-Called Reiter's Disease), Tr. A. Am. Physicians **57**: 307, 1942.

4. Lever, W. F., and Crawford, G. M.: Keratosis Blennorrhagica Without Gonorrhea (Reiter's Disease?), Arch. Dermat. & Syph. **49**: 389 (June) 1944.

Characteristic of the entire group was the explosive onset of an acute polyarthritis accompanied by a moderate elevation of temperature. The chill which so often initiates acute specific infectious arthritis was significantly absent in every case. The affected joints were red, hot, swollen and tender. The involved joints are shown in figure 1. Noteworthy is the fact that many of these cases were initially regarded as either acute rheumatic fever or gonorrheal arthritis.

During this acute stage the leukocyte count averaged 12,000 per cubic millimeter. The sedimentation of the erythrocytes was rapid in all cases. The peak was not reached until approximately four to six weeks after the onset of the arthritis, when the urethritis and conjunctivitis had subsided and the inflammation of the joints was less acute.

In 8 cases a joint was aspirated. The fluid contained from 9,000 to 14,000 leukocytes per cubic millimeter, of which 65 to 74 per cent were neutrophils. Smears were negative and cultures on routine and

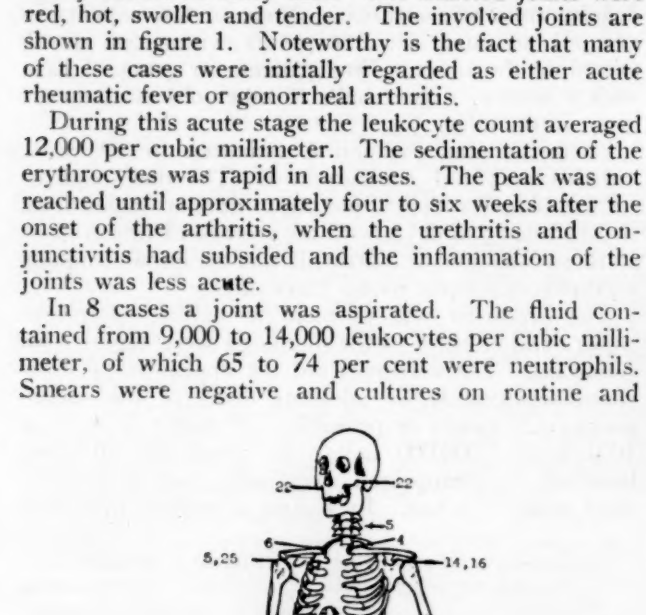

Fig. 1.—Distribution of joint involvement by case numbers.

selective mediums were sterile. Gonococcus complement fixation reactions on blood and synovial fluid were negative in the 3 cases in which the test was employed.

Roentgenographic abnormalities were noted in 18 cases. These changes first appeared approximately two months after the onset of the disease. Osteoporosis of the bone ends was the characteristic finding. Often this was spotty, and never was it sharply defined. In addition, periosteal proliferation developed in 3 cases. Subsequent roentgenograms in 2 cases showed a disappearance of this. Actual bony destruction in a small joint was noted in only 2 cases.

The clinical course showed little variation except for the total duration of the disease. As a rule, the acute stage lasted from four to six weeks. In only 1 case was there further progression to new joints after this time. Following the acute stage, most joints returned to normal. In many, however, a few of the most severely affected joints continued to be swollen and stiff without signs of acute inflammation. Fever and leukocytosis disappeared within seven to ten days. The sedimentation rate returned to normal in approximately three months in most cases.

The duration varied. Some patients became asymptomatic in three months; others still under observation have symptoms after eight months. The average dura-

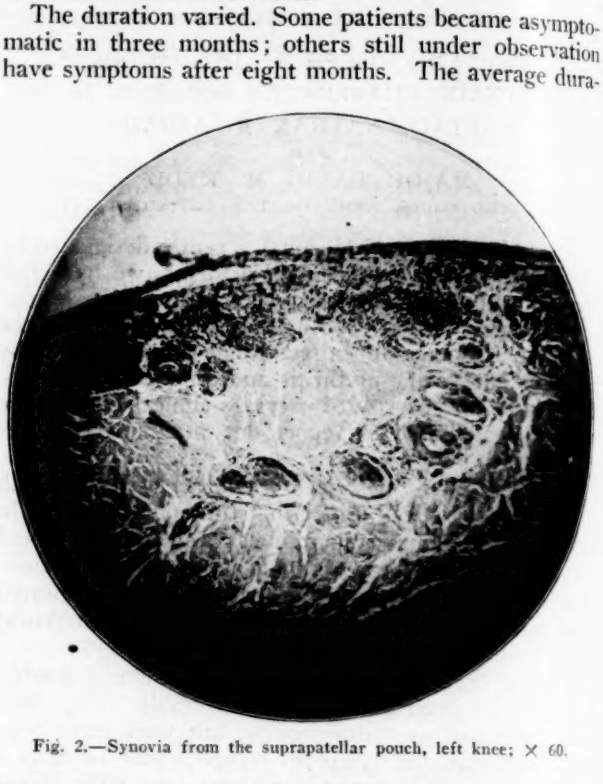

Fig. 2.—Synovia from the suprapatellar pouch, left knee; × 60.

tion in 6 patients who returned to duty was five months. Recurrences of joint swelling and pain were encountered in 7 patients. Three patients gave a history of a previous attack of the symptom triad followed by complete remissions of nine, sixteen and twenty-nine

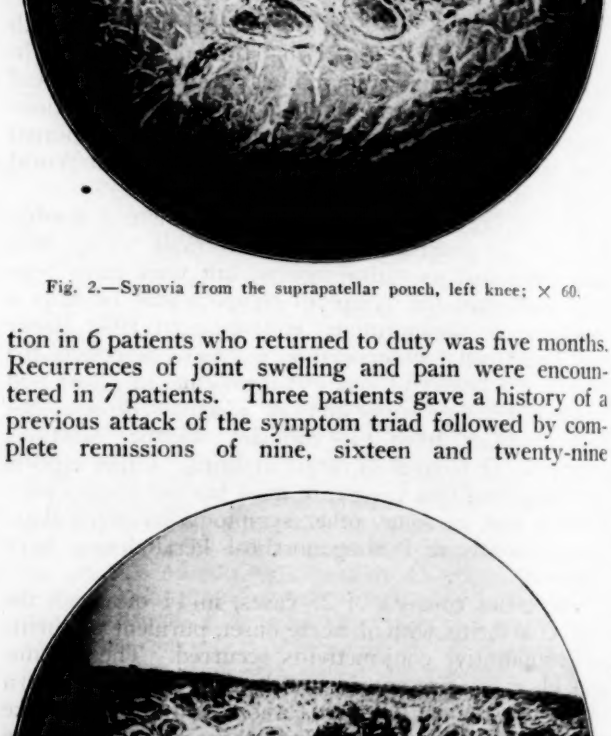

Fig. 3.—Synovia from the infrapatellar fat pad; × 60.

months respectively. Unilateral superficial keratitis developed during the course of the disease in 2 patients who had had an early conjunctivitis and in 1 who had had no previous ocular abnormalities. One patient without previous eye symptoms developed a moder-

ately severe iritis. No permanent ocular damage was encountered.

An arthrotomy was performed on the right knee of 1 patient in the eighth month of his disease. The synovia was congested and presented a reddish purple appearance. No gross thickening was noted. There were several small circumscribed areas of white fibrinous-like material lying on the surface of the synovium. Portions of synovia from the floor of the suprapatellar pouch just proximal to the articular surface of the condyle and from the congested infrapatellar fat pad were removed for section. The cartilage appeared normal.

Microscopic examination revealed intense inflammatory reaction, which was limited to the superficial synovial layers and did not involve the supporting collagen, fibrous connective tissue or vessel walls (fig. 2). The synovium was thrown into large club-like projections in which the abundant capillaries were all dilated. Each projection was distended by a heavy lymphocytic infiltrate mixed with a smattering of plasma cells and a few neutrophils. No fibrinous exudate was observed. The intima was approximately six to ten layers deep. Only a few perivascular focal collections of lymphocytes and plasma cells could be found. There were no well defined new capillaries, and the intense hyperemia consisted of dilatation of preexisting capillaries (fig. 3).

On the basis of our observations we believe that Reiter's syndrome may exist even when the triad of arthritis, nonspecific urethritis and suppurative conjunctivitis is incomplete. In our series conjunctivitis was commonly absent.

We believe, moreover, that this disease is a clinical entity. It differs from the acute specific infectious arthritides in many respects. The course in practically all our patients has been that of a self-limited disease without residual damage to any body structure in spite of the lack of definitive therapy. Prior to the use of sulfonamides and penicillin, no group of patients with acute specific infectious arthritis had such a favorable prognosis. Recurrences such as occurred in our patients are not characteristic of specific forms of arthritis. The initial rise of temperature, white blood count and the synovial fluid cell counts were considerably lower than are commonly observed in the specific types. Response to chemotherapy was lacking.

Differentiation from rheumatoid arthritis is more difficult clinically. The association of nonspecific urethritis with or without suppurative conjunctivitis is not common in the latter. Furthermore, recurrences of such a triad have not been described in rheumatoid arthritis. While a biopsy was taken of only one joint in our series, the findings were similar to those in the case reported by Bauer and Engleman even though it was performed later in the course of the disease. The intense hyperemia and cellular reaction, limited to the superficial layers of the synovium, was quite striking and distinctly different from the appearance in rheumatoid arthritis.

CONCLUSION

From our observations in 11 cases of polyarthritis, nonspecific urethritis and conjunctivitis, identical with those described previously as the Reiter syndrome, and 14 cases similar to this group except for the absence of conjunctivitis, we believe that these two groups are similar and that they represent a clinical entity distinct from specific infectious arthritis or rheumatoid arthritis.

THE COMING AGE OF INDUSTRIAL MEDICINE

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WASHINGTON, D. C.

Industrial health in wartime is a very critical aspect of our whole national manpower problem. Wartime taught us that the resources of human capacity are the greatest resources in any country. We started out in 1940 to train 900,000 men a year in a peacetime military training program. That was easy to accomuplish, and our manpower seemed completely adequate for such a purpose. We have learned, as a result of our experience in the war, that our manpower is neither inexhaustible nor is it always available. We cannot waste or neglect it. On the contrary we must carefully nurture, husband and train it and wisely allocate and employ it if we are to achieve our national purposes. It has been the function of the Selective Service System and the War Manpower Commission to supervise this utilization of manpower and to bring sharply to mind its problems in wartime which may be a guide to our postwar needs.

TABLE 1.—*Analysis of the Total Manpower Situation, Jan. 1, 1945*

Total population	138,000,000
Total male population	69,000,000
Total number of registrants 18-65 years of age	45,000,000
Total number of registrants 18-44 years of age	29,000,000
Total number of registrants 18-37 years of age (liable for military service)	22,000,000
Total number of registrants who have been in armed forces	10,700,000
Registrants 18-37 years of age rejected for service	4,500,000
Registrants 18-37 years of age in other classes	6,800,000

One of the early outstanding problems was the significance of the health and fitness of individuals. This was brought sharply in relief as the military authorities indicated that older men were not equal to the onerous duties of battle and the demand for younger men mounted. With all the conflicting needs of manpower for combat and war production and for food and with goals that would have been in ordinary times impossible to meet, it may be recorded that the handling of the manpower program was adequate for the situation. We raised an Army and Navy of 12,000,000 men. We had a labor force of more than 50,000,000 men and women, and the final test of the success of the manpower problem was the victory both in Europe and in the Pacific.

SIZE OF THE MANPOWER PROBLEM

Some statistics will indicate the size of the manpower problem with which we were dealing in wartime. The situation on Jan. 1, 1945 was as shown in table 1.

THE MILITARY MANPOWER PROBLEM

Military manpower needs were determined and they were effectively supplied. Selective Service procured registrants of military age and sent forward to the induction stations, with or without examination, those believed capable of service. The armed forces induction

Paper to have been presented before the Annual Congress on Industrial Health, Chicago, Feb. 13, 1945.

In the preparation of this paper assistance was given by Col. Edward A. Fitzpatrick, A. U. S., Col. John N. Andrews, Infantry, Col. William M. Wilder, Infantry, and the Division of Research and Statistics of the Selective Service System.

stations made physical examinations and inducted into the service those men not deferred and considered physically, mentally and morally fit. The armed forces gave all basic and other forms of training prior to combat, discharged on Certificates of Disability all those found inapt or adjudged unfit, accorded to all members of the fighting forces the finest medical service that this country could provide, rehabilitated defects on an unprecedented scale, considered assignments judiciously and as far as possible utilized manpower to best advantage. Thus the military authorities were able to build the finest fighting force in history from the manpower available in the nation. But, in doing so, Selective Service and the armed forces uncovered some national weaknesses of which the nation and we, as doctors, must take cognizance.

TABLE 2.—*Estimated Principal Causes for Rejection of Registrants 18-37 Years of Age in Class IV-F and Classes with F Designation* April 1, 1945*

Principal Cause for Rejection	Number			Per Cent		
	Total	White†	Negro	Total	White†	Negro
Total	4,629,000	3,743,000	886,000	100.0	100.0	100.0
Manifestly disqualifying defects	489,100	423,800	65,300	10.6	11.3	7.4
Mental disease	809,300	717,200	92,100	17.5	19.2	10.4
Mental deficiency‡	644,800	355,600	289,200	13.9	9.5	32.6
Physical defects	2,614,300	2,188,400	425,900	56.5	58.4	48.1
Musculoskeletal	350,300	311,500	38,800	7.6	8.3	4.4
Cardiovascular	303,000	253,500	49,500	6.5	6.8	5.6
Syphilis	262,800	104,000	158,800	5.7	2.8	17.9
Hernia	254,200	225,200	29,000	5.5	6.0	3.3
Neurologic	230,100	206,300	23,800	5.0	5.5	2.7
Eyes	227,700	201,900	25,800	4.9	5.4	2.9
Ears	180,200	175,000	5,200	3.9	4.7	0.6
Tuberculosis	125,000	112,300	12,700	2.7	3.0	1.4
Lungs	82,100	72,400	9,700	1.8	1.9	1.1
Underweight and overweight	66,800	62,400	4,400	1.4	1.7	0.5
Feet	63,600	49,800	13,800	1.4	1.3	1.6
Abdominal viscera	60,400	57,900	2,500	1.3	1.6	0.3
Kidney and urinary	50,300	45,500	4,800	1.1	1.2	0.5
Varicose veins	46,600	41,300	5,300	1.0	1.1	0.6
Genitalia	46,100	36,400	9,700	1.0	1.0	1.1
Endocrine	43,700	42,000	1,700	0.9	1.1	0.2
Teeth	36,200	33,900	2,300	0.8	0.9	0.2
Neoplasms	30,000	27,300	2,700	0.6	0.7	0.3
Skin	29,700	26,500	3,200	0.6	0.7	0.4
Nose	28,000	26,900	1,100	0.6	0.7	0.1
Hemorrhoids	18,600	15,700	2,900	0.4	0.4	0.3
Gonorrhea and other venereal	18,400	7,300	11,100	0.4	0.2	1.2
Mouth and gums	12,000	11,200	800	0.3	0.3	0.1
Infectious and parasitic	5,500	4,900	600	0.1	0.1	0.1
Throat	4,300	3,700	600	0.1	0.1	0.1
Blood and blood forming	4,200	3,700	500	0.1	0.1	0.1
Other medical	34,500	29,900	4,600	0.8	0.8	0.5
Nonmedical	71,500	58,000	13,500	1.5	1.6	1.5

* Includes registrants in classes II-A, B and C with F designation.
† Includes all races other than Negro.
‡ Includes (1) registrants with more than one disqualifying defect who were rejected for educational deficiency prior to June 1, 1943, (2) registrants rejected for failure to meet minimum intelligence standards beginning June 1, 1943 and (3) morons, imbeciles and idiots rejected November 1940-March 1945.

REJECTION OF REGISTRANTS BY CATEGORY AND NUMBER

Table 2 gives in broad categories the number of rejections as of April 1, 1945.[1] While the rejection rate is a less reliable index of the national health picture than is the incidence of defects, yet it gives some insight of our shortcomings in health, at least from a military point of view. The table shows that the number of rejections in the IV-F pool is 4,629,000 as of April 1, 1945 and also reveals the causes for these rejections. Medically, rejection does not mean that these four and one-half million men are cripples but rather that they are below military requirements. The standards, however, have been investigated thoroughly by a Presidential commission and are considered rock bottom from a military point of view.

1. This paper was for a February 1945 meeting, presented on request and brought up to date.

THE CIVILIAN MANPOWER PROBLEM

Like "taxes," the civilian manpower problem is with us always both in peace and in war. In war it is especially difficult, because if we take men out of the civilian labor force and put them in the Army we increase the demands of civilian labor force to arm, clothe, feed and maintain these men as soldiers. The constantly fluctuating and unsettled conditions of wartime adds to the problem, factors which do not exist in peacetime.

The size and composition of the labor force for 1942, 1943 and 1944 and the distribution of working personnel is indicated in table 3. From the table it appears that as men in industry decreased in number from 37,610,000 to 34,060,000 the number of women increased by more than 2,000,000, from 16,020,000 to 18,150,000. The additional million is probably made up largely from the ranks of the previously unemployed.

PROBLEM OF RURAL INDUSTRIAL MANPOWER

The problem of industrial manpower has been evident in the country as in the city. The problem has become no less important in wartime as in peace. It becomes more important in view of the diminishing labor force on farms. Many expedients were developed to spread the regular labor force on farms from cities by the creation of women land armies and by special training methods and provision of transportation of itinerant workers. The same problems exist for the farm as for the factory. The problem of health and fitness was as significant in the country as in the city, and there was no superiority in the physical fitness of farmers as compared with industrial workers. The farmer and the food processor have met the demands of our civilian and military manpower as has the industrial worker.

TABLE 3.—*The Labor Force, 1942, 1943 and 1944*

	December 1942	December 1943	December 1944
Labor force	53,630,000	51,960,000	52,210,000
Men	37,610,000	34,780,000	34,060,000
Women	16,020,000	17,120,000	18,150,000
Agricultural	7,380,000	6,820,000	8,140,000
Nonagricultural	44,850,000	44,190,000	43,390,000
Unemployed	1,400,000	890,000	680,000

Nonagricultural employment includes mining, construction, transportation and public utilities, government, finance, service, trade, manufacturing and miscellaneous.

A SUMMARY VIEW OF THE WARTIME INDUSTRIAL HYGIENE PROBLEM

Industrial health, including the health of the agricultural workers, is an important phase of the wartime manpower problem. We have not thought of it in such terms, but it was there all the time. The military manpower had the spotlight. But the no less necessary but less spectacular war and food production were progressively required to reach extraordinary goals not only with less manpower but with a manpower less physically fit. The process of selection selected the physically fit (1-A) and left those not fit for military service (the IV-F's). There was a further fact of great significance that great numbers of doctors and dentists entered the military service, and the industrial and agricultural population lacked adequate medical care according to peacetime standards.

ANTICIPATING POSTWAR PROBLEMS

In the postwar world this problem of industrial health will be even more significant. There will be cutbacks, frictional unemployment and reconversion. There will be the necessary readjustments. There will be more than 10,000,000 returning from the armed forces, many handicapped. There will also be the need of the readjustment of the medical and dental professions, not only to care for the civilian population, but to care for the hospitalized veterans of the war.

INDUSTRIAL EMPLOYMENT CONDITIONS

During war, manpower engaged in industry was characterized by high rates of turnover and absenteeism. Several factors contributed to the cause. Men moved by a spirit of adventure want to "go places and see things" and hence take advantage of every opportunity for change. The more shiftless avoid work completely as their finances permit. Many war workers live in mushroom settlements which are low in sanitary provisions and in medical and dental facilities. But, above all else, the greatest difficulty is found in the ranks of the workers themselves. Though many in industry are deferred for special skill, yet industry as a whole has been forced to accept what the military establishment has rejected from their point of view as unsuitable. More than 5,000,000 men have been discarded as fighters and these men were left for industry and other occupations to absorb. In addition, at present, preemployment examinations are at a very low ebb. Hours are long and the work week consists often of six or even seven days. Women are employed as substitutes as the healthy males are inducted. War working conditions are poor and below peacetime standards.

Despite all the handicaps faced by management and labor, production has proceeded at a very high level. It has been estimated that since July 1940 the war production plants, including clothing manufactured for the armed forces, have turned out war material valued at more than $170,000,000,000 (August 1943 price level). While this tremendous output was being accomplished, livestock production steadily increased. In 1944 this production expanded from 29,659,000,000 pounds to 41,755,000,000 pounds, or an increase of 41 per cent over the average for the years 1935-1939. Total agricultural production in 1944 was increased by 33 per cent over the average for the period 1935-1939.[2]

MEDICAL ATTENTION TO HYGIENE AND HEALTH OF WAR WORKERS

The problem of hygiene and health were early recognized. They were met through the cooperation of medicine, public health, management and labor, and the government—especially through the help of local health authorities. In most instances each problem presented received prompt and effective attention. Considering the magnitude of the problems involved, the results have been eminently satisfactory. Medical cooperation has been a real factor in our splendid record of production achievement.

FOOD PRODUCTION: THE FARMERS, THEIR DEFERMENT AND THEIR HEALTH

The health of the farmer is a national problem. Food production also is obviously essential to the welfare of the nation. Hence farmers, as essential workers, received special consideration in deferments under the Selective Service System. In this country there are at the present time 6,000,000 farms and 12,000,000 farmers considered as family and hired workers. As of Sept. 1, 1943, 1,600,000 farmers 18 to 37 years of age were being deferred and an additional 550,000 farmers were liable for military service but were not being called at that time because of their age, 38 to 45 years. Now in 1945 the situation is essentially unchanged. Deferments for farmers 18-37 years of age are still running in the neighborhood of 1,600,000.

Since 1939-1940 some 4,500,000 men have left the farms and approximately 1,200,000 have been inducted. Most of the others have found their way into cities and towns and have entered some form of industry. As a result, farm labor is scarce. Despite manpower shortage, our food production is high; in fact, the highest in our entire history. Food production has been sufficient to meet the needs of fighting men and our people at home, with enough left over to supplement materially the food supply of our allies. Food restrictions have not been sufficient to date to affect in any way the health of our people. In fact, nutrition is probably better now than in peacetime because of better wages and the greater purchasing power among the poor.

RURAL HEALTH AND MEDICAL CARE

Surveys of the health situation among the rural families in some of the states indicate that a large proportion of farmers have poor health, that the facilities for health services are below normal requirements and that there is a pitiful inadequacy of the care provided regularly for the lower income families. A look at some of the surveys indicates that between one third and one half of the lower income groups have no medical or dental care whatsoever. Of the 16,000 cases of serious illness reported by farm families in Texas and Oklahoma, less than one half had a doctor's care. Only one out of three births was attended by a physician.[3]

Physical examinations of farmers in three Nebraska counties revealed that about 72 per cent of men would not have met the current standards for military service. In rural areas, death rates among mothers and infants far exceed those of urban mothers and babies. At almost every age level, death rates are greater in rural areas, and especially in towns and cities from 2,500 to 10,000 population, than in our largest urban centers.[4] In recent examinations, farm youth 18 and 19 years old showed the highest Selective Service rejection rate for physical, mental or educational defects of any occupational group: 41 per cent compared to an average of 25 per cent for other groups.[5]

In most rural counties, public health services and hospitals are far from adequate. For years physicians have been leaving not only the rural areas for the cities, but the poorer agricultural states for more prosperous ones. Before the war, many areas had but one physician for every two or three thousand people. War has further aggravated this situation. More rural physicians have entered the armed forces than have urban ones. Most of those remaining are older men. If rural areas are to have more adequate health service to meet the needs of the future, comprehensive plans must be made for this service.

The national physician-to-population ratio which is considered the minimum necessary to protect civilian health is probably about 1 to 1,000. Individual areas

2. Information supplied by the Division of Economic Information, Bureau of Agricultural Economics, U. S. Department of Agriculture.

3. Kleinschmidt, L. S.: How Can Better Rural Health Be Developed? Rural Sociol., March 1944, p. 23.

4. Anderson, Elin L.: Adequate Medical Care for Rural Families, J. Home Econ. **36**: 397 (Sept.) 1944.

5. Fact Sheet on Rural Health and Sanitation, United States Department of Agriculture, Jan. 3, 1945.

are considered critical if they have a ratio of one physician to 1,500. In April 1942, sixteen rural states had less than one active private practitioner for 1,500 people in 1,005 rural counties which neither included a metropolitan center nor were adjacent to counties which had metropolitan centers. The total population of these counties exceeded 22,000,000. The average number of persons per active practitioner in these 1,005 counties was 2,015. In the same month an equitable distribution of the nation's available physicians could have provided one for every 937 persons.

The shortage of dentists in rural areas is even worse. One Southern state reported one dentist to every 11,000 people for the entire state. The teeth of many farmers and members of their families are in need of dental work. Among hundreds of thousands of farmers, dental care is practically unknown. And it is not only their teeth that suffer, but sometimes their entire system as a result of neglect of the teeth.

Many rural areas have inadequate or no hospital facilities. It has been estimated that over 1,200 counties of the United States are without a single satisfactory general hospital. While some of the counties have had some service from adjoining counties, many are in dire need of hospitals—at least emergency facilities.

In 1941, of America's 3,070 counties, 1,400 were without services of full time departments of public health—and practically all of them were rural counties. The situation now is even worse because of the war.[6]

If rural people are to share more fully in the benefits of modern medical science, they need immediate help in four areas: determining need for physicians and means of attracting them to rural areas after the war, getting legislation to enable communities to establish hospitals and health centers, setting up programs that emphasize preventive medicine rather than catastrophic illness and carrying out an educational program that will clarify the issues involved.

THE GENERAL WARTIME PICTURE OF THE HEALTH OF THE NATION

Despite the stress and strain of worldwide conflict, the health of the people remains good, surprisingly good in the extraordinary situation. The mortality statistics for 1943 and 1944 reveal a death rate unprecedentedly low. In the first month of 1945 the general death rate, estimated from the 10 per cent mortality sample, was 11.3 deaths per thousand of population, which is significantly lower than the rate of 13.4 for January 1944 and 6 per cent lower than the expected rate. Fortunately, the nation has been spared any serious epidemic.

But despite the low mortality figures, war has taken a definite toll of the health of the civilians. Families and homes have been disrupted. Emotional and mental distresses increased greatly. Men and women were breaking physically, emotionally and mentally in large numbers. So in addition to the great demands on war medicine some serious health problems are being encountered on the civilian front especially in the field of nervous and emotional disorders. Medical men, wherever they may be, are heroically attempting to meet the old and new challenges with new ideas, new principles and new methods of practice.

BROAD CONSIDERATIONS BEARING ON INDUSTRIAL MEDICINE

Jobs for 60,000,000 workers is the postwar employment objective. In this country and in most civilized nations, labor is struggling with fundamental social problems having to do with the welfare of the people. The International Labor Code of 1939 reveals the depth and breadth of these efforts. Many of the questions with which labor deals present medical angles. Only through wise medical guidance can best solutions be obtained. Obviously employment itself, a living wage, a satisfactory home and proper nutrition are all essentials here as everywhere. Wages, working hours, rest periods and an annual holiday are of national concern to all. The employment of minors, their training and pay, and especially their use on night shifts needs careful supervision. The employment of women, now so general, calls for special consideration. Problems of industrial health, safety and welfare are newly laid at our door. Social insurance is struggling for recognition. New legislation is being sought. Labor statistics are being compiled. Migration is receiving consideration. Standards for judgment and action are being devised. These represent broad considerations in which medicine must take its stand.

Employment is essential to life, liberty and the pursuit of happiness and also to mental, moral and physical health. Employment will have to be found not only for those now at work in this country but for the 10,000,000 men and women who will return at the close of the war. Adjustment to peacetime employment will in most instances be just as difficult as that required on entering military service. Hence proper provision must be planned and made available in advance of the return of the veterans. With 60,000,000 people to be employed in the plants and shops and on the farms this represents the greatest postwar problem which the nation and the healing arts have to face.

THE MEDICAL PROFESSION AND EMPLOYMENT OF WAR VETERANS AND OF THE HANDICAPPED

While this nation was at war medicine and dentistry were likewise at war. No part of the entire war effort —combat, production or agriculture—was more effective than was that of the professions of medicine and dentistry. Industry faces the greatest problem of its history in the forthcoming postwar period. Labor, management, medicine and dentistry must unite in a common effort in which the rights of all must be considered. The welfare of each group must be considered in the great cooperative efforts necessary to meet the great problems. The high ideals of the medical and dental profession will meet the challenge of the new situation in terms of its long-standing practices.

In the postwar period many changes will be effected. More and more professional men will enter into industrial endeavors. Industrial medicine will demand the maximum efforts of the medical and dental professions. Medicine stands ready in this emergency, as in all others, present and past, to do its share. This, however, should be done through cooperation and not by coercion. Only plans winning whole-hearted medical support will yield maximum results.

THE HANDICAPPED AND THEIR EMPLOYMENT

The war has centered attention on the employment of the handicapped. This will be an important problem in postwar industry. Manpower shortage already has compelled the employment of great numbers of the halt, the lame and the blind. Management has been able to find some place for all handicapped workers to make a contribution to the war effort. Management states that the major difficulties rest not with the individuals concerned but with problems of insurance and

6. Fact Sheet on Rural Health and Sanitation,[5] pp. 2-4.

unionism. Medicine believes that there is a definite place in industry for handicapped persons, including the cardiac provided proper consideration is given to their examination, placement and routine check-up.

Absorbing the disabled veteran so that he may take his place in society is one of the major tasks of business and industry. Although the first responsibility for rehabilitation and vocational adjustment of discharged servicemen in the United States is placed on the Veterans Administration, much of the responsibility for the veteran's return to normal life falls upon industry. It is not a responsibility that will be shirked. Individual companies throughout the country are making plans not only to take back into their organization those of their own employees who have become disabled but to absorb as many as possible of the handicapped servicemen who have not previously been employed by the company. Many successful programs are already in operation.

The medical profession has much responsibility in helping disabled veterans make their adjustment. The doctors and dentists who are associated with industrial and business firms, either on a full or on a part time basis, will have an especial opportunity in this regard.

The successful placement of handicapped workers requires close coordination of efforts of the personnel and medical departments. Mr. Michael Supa, supervisor of the physically handicapped personnel of the International Business Machines Corporation, who is himself blind, writes:

> Proper placement of the physically handicapped person has the same results as the proper placement of nonhandicapped individuals. If properly placed, the physically handicapped person is not a handicapped worker.

War casualties are now bringing into industry in large numbers persons with physical defects of all kinds, loss of arms and legs, of vision and of hearing. Fortunately the Medical Corps of the Army and Navy have gone to great lengths to train these victims of violence with physical and mental handicaps and condition them for future employment. The majority of such men will face their problem of peacetime employment with the same kind of courage, ingenuity and understanding that characterized their actions on the field of battle. As long as these victims are willing to work and to approach employment in a cooperative spirit, all these major problems should be susceptible of solution, including matters pertaining to insurance and to unions. Success will depend largely on the spirit of veterans, of labor and of management. But since the rights of veterans have been bought on the field of battle and have been paid for in advance, the American people, if need be, will see that these rights are recognized and met.

MEDICAL EDUCATION AND RESEARCH

Many of the medical and dental officers who have served with the Army and Navy will seek refresher or postgraduate courses before they return to civilian practice, while others will want to undertake such training after they resume civilian practice. Expansion of special training facilities through increased provision of teaching hospitals and medical centers will be required.

Tremendous progress has been made in medical research during the war. The curative powers of penicillin and sulfonamide drugs, the life saving value of blood plasma and serum albumin and typhus vaccine, and the development of new malaria control methods are all fruits of a concentration and expansion of medical research resulting from determination to win the war. Adequate financing, coordination and teamwork have been the keys to this success. Through governmental agencies, such as the Army, Navy and the Office of Scientific Research and Development, and quasigovernmental agencies such as the National Research Council, and nongovernmental agencies such as the universities, pharmaceutical houses and other groups, the nation's resources for research have been mobilized in a vast cooperative effort.

With victory attained, we now approach the challenges of peace. Many problems await solution. Much long-term, as well as short-term, research into the cause and cures of cancer, arteriosclerosis, hypertension, dental decay and nervous and mental disorders must be undertaken in order to assure further progress against disease.

THE NEED FOR ORGANIZED RESEARCH FOR INDUSTRIAL HEALTH

The professions of medicine and dentistry and the medical and dental schools must organize research in the interest of industrial health and hygiene, for the purpose both of making new discoveries and adding new technics and of utilizing more effectively the wide but unrelated knowledge and technic that already exists. Research as an important basic instrument in our program must not be overlooked and for the long run it is absolutely essential. It means that all workers will work more effectively and will bring about greater advances. To complete the whole program, professional training of old and new workers in the industrial field will need to be added to organized research. Let us look briefly at a practical program already proposed.

THE NEED FOR A BASIC TRAINING PROGRAM FOR INDUSTRIAL HEALTH PERSONNEL

Nor must one forget that the whole program for the improvement of industrial health will require a definite educational program. This will have to take the place of our very incomplete and fragmentary efforts at the present time in providing systematic facilities for instruction in modern health industrial methods both before and after graduation. Such instruction will have to be a part of the curriculum of the school for the undergraduate. Provision will have to be made also for advanced systematic study in bona fide graduate instruction as well as continuing postgraduate instruction for the doctor engaged in practice. In a report by committees representing the American Association of Industrial Physicians and Surgeons and the Council on Industrial Health of the American Medical Association, the need for a unified plan is expressed "which assigns overall responsibility for coordinated classroom discussion, field studies and laboratory and section work to one single teaching division, preferably preventive medicine and public health. There must always be considerable dependence on clinical teaching in the medical and surgical aspects of industrial practice, but the testimony of recent graduates clearly indicates that older methods of divided and unrelated instruction fail to provide dependable and reasonably complete information." The same committee emphasizes the need to teach the administrative aspects of industrial health organization in plants, factories, mines and stores. It outlines two additional aspects of the content of instruction to be given as (1) industrial hygiene and toxicology

and (2) industrial medicine and traumatic surgery. In the former, emphasis will be placed on prevention as a cardinal principle for reducing the incidence of disability in industry. In the second phase the object will be the "full restoration of the injured worker to his former earning capacity in the same line of work and without unnecessary delay." The whole program will promote industrial efficiency, increase earning power and establish cooperative, industrial relations. All of these will contribute to the most effective organization of the labor force and make available manpower serve more effectively the public interest and promote the common welfare.

CONCLUSION

The postwar situation is a challenge which American medicine cannot and will not ignore. As medical advisers of the greatest of industrial nations, American medicine will serve to keep American leadership and supremacy. It will be found cooperating with labor and with management and will be giving the individual workman and farmer a medical care better than elsewhere available in the whole world. It will, by its research, its ingenuity, its professional knowledge, help create the standards for employment conditions which, together with an individual care comparable to the care it gave the American soldier, will make American manpower, in quality and quantity of production, the greatest in the world.

CLINICAL AND EPIDEMIOLOGIC ASPECTS OF EPIDEMIC PLEURODYNIA

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In recent years the medical profession has become alerted to a disease, pleurodynia, which was relatively unknown twenty-five years ago. Its frequent dramatic appearance in epidemic outbreaks over widely separated areas of the world has elicited many and varied clinical descriptions. The American reports of epidemics together with historical summary of the disease have been enumerated in a recent paper by Tasker Howard[1] and his associates describing an epidemic in Brooklyn in 1942.

The great majority of the authors have stressed the extent of the epidemic, its distinctive clinical characteristics, the essentially benign character of the disease, its self-limited course free from sequelae, and its importance in diagnostic differentiation from many more serious medical and surgical conditions. In addition to the epidemic of 75 cases reported here, I have encountered many additional sporadic cases in various other communities. As knowledge and awareness of the disease picture become more widely disseminated, a more precise estimate of its true incidence in both its sporadic and its epidemic form may be realized.

Less consideration has been hitherto directed toward the morbidity aspects of the disease. The afflicted individual, although reassured as to his ultimate recovery, nevertheless finds himself relatively incapacitated and unable to perform his regular duties successfully over an indefinite period of time. Such disability when multiplied *en masse* for an entire group of a working population may exert a significant effect on industrial efficiency. One of my purposes in this paper is to focus attention on the subjective reactions of the ailing individual. More accurate appreciation of these factors may alter our concept of the disease and reorientate our ideas of the degree of incapacity associated with it, while noting its effect on economic loss.

A clearer delineation of the disease syndrome and its economic implications would be an effective stimulant toward expanding our knowledge of the epidemiologic aspects of the disease. Only scant reference has been made in past reports of epidemics of epidemic pleurodynia to its mode of spread and communicability. Adequate information concerning these factors has been far from satisfactory. For the public health control of the disease, it is essential that more epidemiologic data be forthcoming.

In the early summer of 1944 I was confronted with an outbreak of epidemic pleurodynia on an island war housing project for shipyard workers. In view of the uniformity of environmental conditions and the economic status of the population, a study of the disease, with emphasis on its clinical behavior, morbidity and epidemiologic characteristics, seemed opportune. The circumstances were such as to preclude an accurate statistical study of the daily clinical progress of the individual patient, the number of relapses, the exact duration of the disease or the amount of absenteeism from work. Because of limited laboratory facilities, studies on the etiology or pathogenesis of the disease were not pursued. In the past, attempts at determining the etiology of the condition have completely failed. Intensive laboratory and bacteriologic studies such as those carried out by McDonald, Hewell and Cooper[2] have yielded negative results. However, recent work at the National Institute of Health has given promising results toward establishing a virus as the infectious agent.

During a period extending from the last week of June 1944 through the middle of November 1944, 75 cases of epidemic pleurodynia or myalgia were collected on Blakely Island, a war housing project, located on an island in the Mobile River, which lies adjacent to a large shipbuilding yard. Occupancy of the 1,200 apartments in this project was limited to employees of this concern. A tunnel for automobile traffic connects the island with the mainland. This group of shipyard workers and their families consisted of white persons, most of whom came from rural areas of Alabama and Mississippi.

EPIDEMIOLOGIC DATA

At the outset it was decided to study the manner of spread of the epidemic by locating each case as it occurred on a spot map of the island housing project. By following the chronological incidence of cases in families, and their successive occurrence in localized areas, it was hoped to secure information bearing on the degree of infectivity of the disease, its relation to environmental factors and the duration of the incubation period. Estimation of the latter has thus far been rather indefinite.

Three weeks after the appearance of the first case, a total of 19 cases had been accumulated. Of these, 6 cases (32 per cent) were confined to an area of three blocks (area I, fig. 1). Seven cases (37 per cent) were in a corresponding area (area II, fig. 1) to the left of the center block of the housing project. The remaining 3 cases were distributed to each of three sparsely populated border zones (areas III, V and VI, fig. 1). With increased incidence of the disease, the bulk of

1. Howard, Tasker, and others: Epidemic Pleurodynia in Brooklyn in the Summer of 1942, J. A. M. A. **121**: 925-929 (March 20) 1943.

2. McDonald, R. R.; Hewell, B., and Cooper, M. L.: Clinical and Bacteriologic Studies in Epidemic Myalgia, or Pleurodynia, Am. J. Dis. Child. **53**: 1425-1434 (June) 1937.

the cases occurred in the first two mentioned areas I and II, with a final count of 22 cases for the former and 19 for the latter. The curves showing the rate of increase in each of these two designated areas are shown in figure 2. The overcrowding in these areas probably served as an important factor in the dissemination of the infectious agent of the disease through the medium of intimate contact. Within the areas proper one may notice a tendency toward grouping of the cases in various regions of a block. Three such groups, consisting of 4 cases each, may be noted in two adjoining blocks of area I (fig. 1). The symbol for each case represents the date when first diagnosed. Reference to table 1 reveals the exact location of the case in addition to the chronological order of its appearance. Thus, Jn5, J5 and A2 represent 3 cases, all from the same apartment, 109 C 9th Street, occurring on June 28, July 24 and August 17. The time interval between these 3 cases from the same household is therefore twenty-six days and twenty-four days.

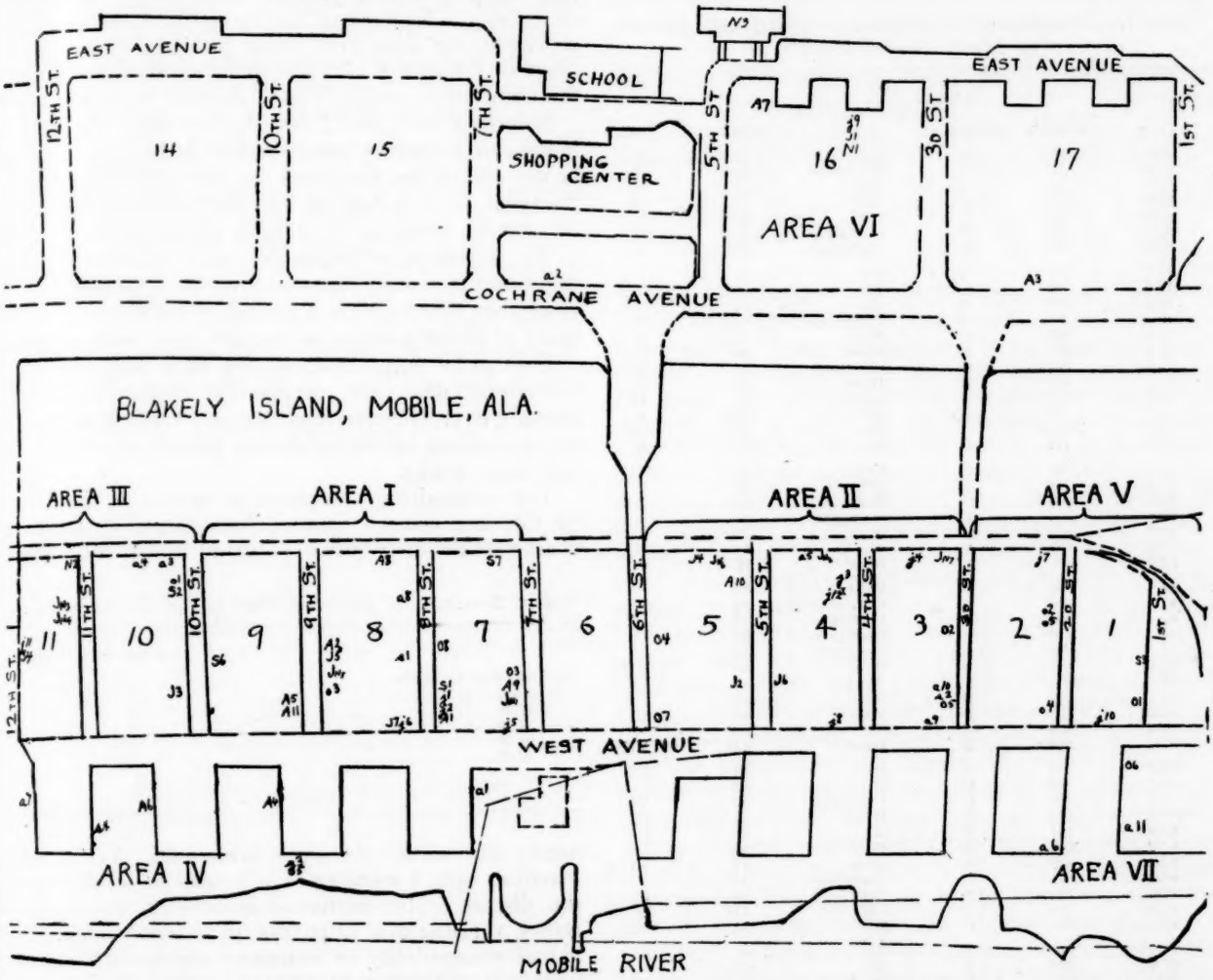

Fig. 1.—Outline spot map of Blakely Island, Mobile, Ala., showing cases of epidemic pleurodynia with respect to location and date of occurrence. Symbols and specific dates in table 1.

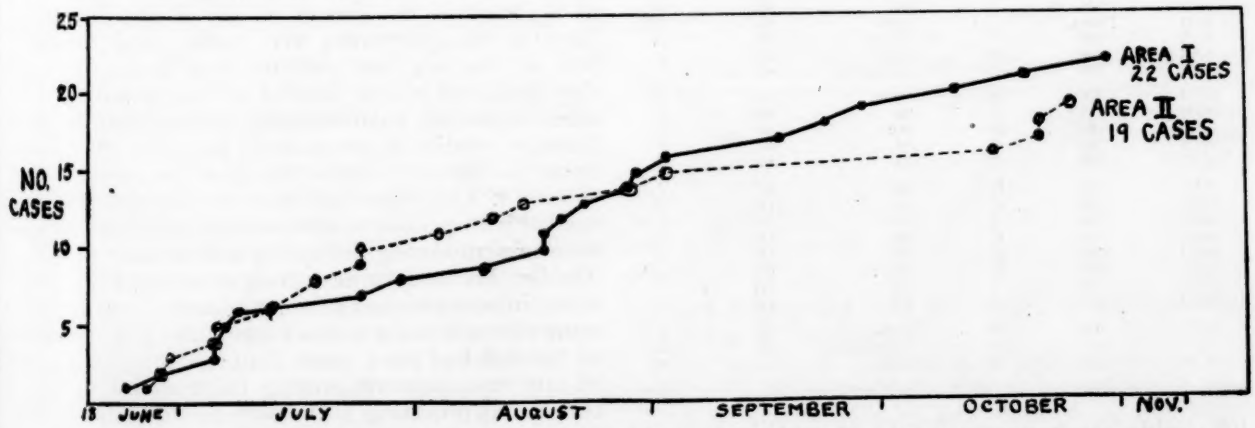

Fig. 2.—Curves showing rate of increase in number of cases of epidemic pleurodynia in two designated areas of housing project.

Another group of cases in area I, j1, j2, A1 and S1, occurred in three adjoining apartments, namely 103 A 8th, 105 A 8th and 107 A 8th at approximately one month intervals. Cases a10, s2 and O5 in area II likewise occurred in three adjoining apartments, namely

TABLE 1.—*Chronological Distribution of Cases, with Location on Island Housing Project*

Date	Address: Number	Address: Apartment	Address: Street	Symbol	Area
6/23	106	B	7th	Jn1	I
6/26	404	D	Cochrane	Jn2	II
6/27	110	D	11th	Jn3	III
6/28	110	C	11th	Jn4	III
6/28	109	C	9th	Jn5	I
6/28	504	D	Cochrane	Jn6	II
6/29	304	C	Cochrane	Jn7	II
7/ 5	105	A	8th	j1	I
7/ 5	107	B	8th	j2	I
7/ 5	120	B	4th	j3	II
7/ 5	406	B	Cochrane	j4	II
7/ 6	701	C	West	j5	I
7/ 8	801	D	West	j6	I
7/ 8	204	C	Cochrane	j7	V
7/12	403	B	West	j8	II
7/12	210	A	East	j9	VI
7/12	107	B	West	j10	V
7/14	Dorm.	..	12th	j11	III
7/15	120	B	4th	j12	II
7/16	210	C	East	J1	VI
7/18	110	A	5th	J2	II
7/21	106	C	10th	J3	III
7/24	506	A	Cochrane	J4	II
7/24	109	C	9th	J5	I
7/24	105	A	5th	J6	II
7/29	801	A	West	J7	I
8/ 1	804	D	West	a1	IV
8/ 1	509	A	Cochrane	a2	VI
8/ 1	1002	C	Cochrane	a3	III
8/ 2	1006	A	Cochrane	a4	III
8/ 3	406	A	Cochrane	a5	II
8/ 8	208	A	West	a6	VII
8/ 9	1112	C	West	a7	IV
8/ 9	120	D	8th	a8	I
8/10	303	D	West	a9	II
8/14	108	A	3d	a10	II
8/14	204	D	West	a11	VII
8/17	103	A	8th	A1	I
8/17	109	C	9th	A2	I
8/17	301	C	Cochrane	A3	VI
8/18	912	B	West	A4	IV
8/19	104	B	9th	A5	I
8/19	1012	B	West	A6	IV
8/22	420	B	East	A7	VI
8/22	804	D	Cochrane	A8	I
8/28	106	B	7th	A9	I
8/28	118	A	5th	A10	II
8/29	102	C	9th	A11	I
9/ 2	110	D	8th	s1	I
9/ 2	106	A	3d	s2	II
9/12	908	D	West	s3	IV
9/15	1104	A	West	s4	IV
9/17	105	A	8th	S1	I
9/19	116	B	10th	S2	III
9/21	108	A	1st	S3	V
9/21	Dorm.	..	12th	S4	III
9/21	908	C	West	S5	IV
9/23	100	D	10th	S6	I
9/28	704	D	Cochrane	S7	I
10/ 9	120	D	10th	o1	III
10/10	112	D	2d	o2	V
10/10	105	D	9th	o3	I
10/11	102	A	2d	o4	V
10/12	110	B	2d	o5	V
10/16	104	D	1st	O1	V
10/17	112	C	3d	O2	II
10/19	108	B	7th	O3	I
10/23	111	C	6th	O4	II
10/23	104	D	3d	O5	II
10/26	202	C	West	O6	VII
10/27	101	A	6th	O7	II
10/30	109	B	8th	O8	I
11/ 1	210	B	East	N1	VI
11/ 3	1102	C	Cochrane	N2	III
11/18	225	B	East	N3	VI

108 A 3d, 106 A 3d and 104 D 3d, with intervals of approximately twenty-two days and forty-eight days respectively. Pairs of cases taken at random throughout the island, as A5, A11, reveal a ten day interval; o1 and S2, a twenty day interval; s3 and S5 (adjoining apartments), a nine day interval; Jn7 and j4 (adjoining apartments), a six day interval.

In each of 2 instances, a6 (208 A West Avenue) and all (204 D West Avenue), the symptoms of epidemic pleurodynia occurred in persons who had been living on the island only over a two week period. j3 and j12 represent cases in a son and his mother occurring on July 5 and July 15 respectively, an interval of ten days. In most of the cases the dates mentioned represent the first visit made instead of the date of onset of symptoms. This would therefore tend to alter the accuracy of any estimated incubation period.

Reference to figure 2 reveals two fairly abrupt rises in the case frequency curves of area I, the first occurring at the end of the first week in July and the second in the third week of August. On the other hand, the curve of area II shows a more even and gradual curve up to the beginning of September, after which no further cases occurred until the third week in October. Four cases then developed in a period of ten days. With the onset of cooler weather no further cases were observed.

It is to be noted that, for the most part, the aforementioned data are necessarily circumstantial and presumptive. Nevertheless, one may venture an approximate estimate of the incubation period as between one and three weeks.

The epidemiologic evidence of spread of the disease by intimate contact seems substantiated by the fairly characteristic distribution of cases in adjoining apartments and within the same household. Yet in many instances only 1 member of a household would develop the disease. The degree of infectivity was therefore rather variable and often not particularly high. Individual susceptibility or immunity are factors that need further investigation in relation to the infectious agent. The concentration of cases in the more congested areas of the community would tend to implicate overcrowding as a factor in the spread of the disease by contact. Most of the apartments were rather small, averaging four or five less than medium sized rooms; yet often they contained several families or several boarders. No other significant environmental factors could be ascertained in relation to the mode of spread of the epidemic or to the sudden rises in the curve of case frequency of area I. One might add that an excessive amount of rainfall with periods of continuously high humidity had been present during the spring and summer of 1944 in Mobile. Harder,[3] in describing an epidemic of pleurodynia in southwestern Ohio, commented on the occurrence of warm moist weather and stated that the amount of rainfall had been more than usual. The majority of our cases occurred during the warmest months of the year as prevailing in the deep South (table 5). The highest number appeared in July and August, namely 21 and 22 cases respectively.

TABLE 2.—*Cases of Epidemic Pleurodynia According to Age*

Age	Number	Percentage
10 years and under	6	8
11-20	21	28
21-30	24	32
31-40	11	15
41-50	10	13
51-60	3	4
Total	75	

In conformity with previous reports, this outbreak of the disease was most prevalent among persons under 30 years of age, totaling in this category 51 cases

3. Harder, F. K.: Epidemic Myalgia or Pleurodynia in Southwestern Ohio, Am. J. M. Sc. **191**: 678-685 (May) 1936.

(68 per cent, table 2). There were only 6 children 10 years of age and under. The youngest patient was aged 7 and the oldest 69.

The sexes have usually been equally affected by this ailment. However, in this group there was a preponderance of females. As noted in table 3, there were 27 males (36 per cent) as compared to 48 females (64 per cent). The significance of this fact on age and sex distribution is limited because of the distinctive nature of the industrial population on the island.

CLINICAL MANIFESTATIONS

Only 10 of the 75 cases (table 4) lacked a history of an abrupt onset, a characteristic finding of the disease. The majority of patients would spontaneously mention the exact hour at which the symptoms first became apparent.

Prodromal symptoms associated with upper respiratory infections were noted in only a small number of cases. Thus, sore throat or a burning type of discomfort in the pharynx were complained of by 9 patients. This finding is in contrast to other epidemics, in which pharyngitis has been a rather prevalent symptom. In 9 cases chills were mentioned as preceding the onset of the illness. Patients frequently related a history of a preceding "run-down" condition that had existed over a variable period of time.

TABLE 3.—*Cases of Epidemic Pleurodynia According to Sex*

Sex	Number	Percentage
Male	27	36
Female	48	64

TABLE 4.—*Cases of Epidemic Pleurodynia According to Type of Onset*

Onset	Number	Percentage
Gradual	10	13
Sudden	65	87

TABLE 5.—*Incidence of Cases During Various Months in 1944*

Month	Number of Cases
June	7
July	21
August	22
September	10
October	12
November	3

A febrile reaction has been one of the most constant findings associated with cases of epidemic pleurodynia. MacDonald [4] reported an incidence of 91 per cent in 70 cases. Table 6 reveals that more than half of the patients in the present series were practically afebrile. Often a patient would complain of feeling flushed or feverish despite the presence of a normal temperature. In about one third of the cases a low grade fever up to 101 F. was present. In a smaller group of 10 cases (13 per cent) the temperature was over 101 F. and in 1 case reached as high as 105 F. Except for an occasional case with bradycardia, no significant alterations of the pulse were noted.

Because of the diverse symptomatology of the disease and the ease with which it could be confused with many other serious medical or surgical conditions, those cases that did not present pain and tenderness in the epigastrium or in either of the subcostal regions were absolved from the diagnosis of pleurodynia. The pain was most frequently of a paroxysmal, lancinating type and radiated throughout the trunk in all directions. Burning or knifelike were terms often used to describe the pain.

TABLE 6.—*Temperature and Pulse Data on First Examination*

75 Cases			56 Cases		
Temperature	Number	Percentage	Pulse	Number	Percentage
97- 99	40	53	50- 60	3	5
99-101	25	34	60- 70	13	23
Over 101	10	13	70-100	31	56
			Over 100	9	16

Others stated that it "cut their breath off" and in many instances a "smothering" sensation was complained of substernally. There was a conspicuous absence of complaints involving pain or aching of the extremities. Variations of the severity of the pain or discomfort seemed directly related to the individual's inherent pain threshold. Moderate palpation over the tender muscles in the epigastric region often elicited severe, inwardly radiating pain associated with a transitory feeling of nausea. In certain individuals objective findings of tenderness in muscles of the upper abdomen were discovered on physical examination, in the absence of subjective complaints.

Table 7 shows the site and frequency with which various areas were involved. It is noteworthy that the trapezius muscles were affected in 29 cases (39 per cent). Scant reference has been made in the literature to such involvement. However, Ronald [5] has noted that, in addition to the abdominal muscles, there is particular involvement of the muscles around the shoulder girdle and neck in some cases of epidemic pleurodynia. On the basis of anatomic and physiologic facts relating to the innervation of the diaphragm by the phrenic and intercostal nerves, he concludes that the clinical manifestations of the disease are due to a pathologic disturbance of the diaphragm or its overlying pleura. Backache was complained of in 22 of our cases (29 per cent). This was referred most frequently to either of the costovertebral areas. A number of patients disclosed the fact that their abdominal or thoracic pain became aggravated with movements of the body, deep breathing or coughing.

TABLE 7.—*Location of Pain and Tenderness Symptoms*

Site	Number of Cases	Percentage
Epigastric	75	100
Subcostal	75	100
Trapezii	29	39
Costovertebral	22	29
Lower abdomen	40	53
Right lower quadrant	31	41

The presence in 31 cases, or 41 per cent, of acute pain and tenderness in the lower right abdominal region overlying the appendix is an indication of the importance of considering pleurodynia in the differential diagnosis of acute appendicitis. Awareness of the essential clinical features of pleurodynia would lead to more accurate diagnoses of such acute surgical emergencies. One should never relax one's vigilance regarding the possi-

4. MacDonald, R. R.: Epidemic Myalgia or Pleurodynia, Pennsylvania M. J. **41**: 919-920 (July) 1938.

5. Ronald, James: Bornholm Disease, J. Roy. Nav. M. Serv. **28**: 144-149 (April) 1942.

bility of acute appendicitis when confronted with any type of acute abdominal pain. Nevertheless, major surgery is not indicated in the treatment of a benign condition such as pleurodynia. Other acute intra-abdominal conditions that need to be differentiated from pleurodynia are acute cholecystitis, perforated peptic ulcer, gastroenteritis and pelvic inflammations. Among other conditions might be mentioned coronary disease, pleurisy, influenza, pneumonia, rheumatism and diseases of the genitourinary system.

The subjective systemic reactions displayed by patients suffering from pleurodynia are in many respects as important in the clinical picture of the disease as are the aforementioned objective findings. In many instances they may even overshadow the latter. In general the patients appeared languid or lethargic, exhibiting varying degrees of prostration and malaise. The peculiar, distinctive character of the pain or discomfort seemed so totally unfamiliar to them that they appeared baffled and often apprehensive as to the possibility of acute appendicitis when confronted with any type of acute abdominal pain. Nevertheless, major surgery is not indicated in the treatment of a benign condition such as pleurodynia. Other acute intra-abdominal conditions that need to be differentiated from pleurodynia are acute cholecystitis, perforated peptic ulcer, gastroenteritis and pelvic inflammations. Among other conditions might be mentioned coronary disease, pleurisy, influenza, pneumonia, rheumatism and diseases of the genitourinary system.

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TABLE 8.—*Incidence of Various Subjective Symptoms*

Symptom	Number of Cases	Percentage
Frontal headache	43	57
Dizziness	30	40
Nausea	46	61
Vomiting	30	40
Paresthesias	21	28
"Smothering," substernal	10	13.3

TABLE 9.—*Data of Blood Determinations*

Sex	Age	Hemoglobin, Percentage	R. B. C.	W. B. C.*	Sedimentation Rate, Mm/Hr.
♀	29	76	4,000,000	8,750	
♂	10	..	.....	5,250	3
♂	37	..	.....	12,000	..
♀	8	58	3,000,000	5,250	20
♀	69	68	3,800,000	4,250	20
♀	21	60	3,500,000	7,250	28
♀	30	58	3,100,000	5,250	15
♀	47	..	.....	5,750	23
♀	45	..	.....	3,750	18.5
♂	20	..	.....	6,000	26
♀	25	60	3,200,000	6,500	..
♂	8	60	.....	8,000	10
♂	37	..	.....	9,000	25
♂	17	..	.....	5,750	19
♀	53	64	3,500,000	7,000	8

* All the differential counts were within normal limits.

One of the foremost complaints was that of frontal headache, noted in 43 cases, or 57 per cent (table 8). It was of a constant, dull character in contrast to the sharp, intermittent pains referred to the region of the occiput. Dizziness, usually associated with the headache, was present in 30 cases (40 per cent). In most reports digestive disturbances have been noted in one third or less of the cases. However, in our series nausea appeared more prominently, involving 61 per cent of the cases, and vomiting was noted in 40 per cent. The incidence of diarrhea or constipation was indeterminate, since self medication during the initial stage of the illness seemed an almost universal practice.

An interesting feature of this outbreak seldom mentioned in previous reports was the presence of paresthesias, especially in females, which occurred in 21 cases (28 per cent). Numbness, tingling and pricking sensations were described usually in the upper extremities. Certain individuals reported fainting attacks. Some were aware of an aching, burning discomfort in the eyes. Another complaint was that of difficulty in focusing their eyes on near objects.

Laboratory findings were necessarily incomplete. At best, such data offer no particular aid in diagnosis or prognosis. A noticeable feature in table 9 is the relatively low levels of hemoglobin and red blood cell counts. The white cell blood cell count was 8,000 or below in 13 out of a total of 16 such counts. The differential counts appeared to be within normal limits. Three fourths of the sedimentation rates performed proved to be elevated. Such preponderance of high sedimentation rates is in agreement with a similar proportion of high sedimentation rates culled from table 1 of the paper by Howard and his associates.[1] Further investigation of this finding in relation to epidemic pleurodynia would seem to be indicated.

Although the duration and course of the disease are unpredictable, one can remain quite confident of its benign termination. The average duration of the present group of cases appeared to be one to two weeks and sometimes longer. A few persons reported residual areas of tenderness in the lower thoracic and upper abdominal regions as long as six to eight weeks after the acute symptoms had subsided. Prognostically one can unreservedly reassure the patient as to his eventual recovery without complications. Only one of my patients, a child of 8 years, developed otitis media during the course of the disease.

COMMENT

In the absence of a known etiologic agent, only symptomatic therapy can be applied for relief from the noxious effects of the disease. Efforts were made to provide effective therapeutic agents so as to enable the patients to resume their important wartime duties within the shortest time, thereby preventing relatively long periods of absenteeism. No such hopes were realized, except for temporary relief secured by the local application of heat and occasional strapping of the lower thoracic region. In spite of the multiplicity of therapeutic agents exhibited, including the sulfonamides, vitamin B_1 and neostigmine, no convincing beneficial results materialized. Certain patients did seem to respond to one or the other of these agents, but the results did not appear to be consistent beyond a certain proportion of cases. Definitive therapy for this disease will depend on the isolation of a specific etiologic agent. In the Annual Report[6] of the U. S. Public Health Service there is a statement relating to the fact that the blood, spinal fluid and nasal washings of human cases of epidemic pleurodynia have yielded an agent pathogenic for monkeys. Further development of such virus studies are in progress (personal communication).

Many reports have stressed the high incidence of involvement of children as well as young adults. Only 6 children under 10 years of age (8 per cent) were noted in our series. In them, the salient presenting features were the abdominal complaints. The ever present shadow of possible acute appendicitis was a matter of great concern to the parents. An accurate evaluation of the clinical picture as a whole, and the presence of acutely painful and tender muscles elsewhere over the abdomen as well as around the thorax, the neck, and high in the epigastrium, may aid in the differential diagnosis.

6. Annual Report of the United States Public Health Service for the Fiscal Year 1944, Federal Security Agency, Washington, D. C.

It is my conviction that sporadic or epidemic cases of pleurodynia are more prevalent than would be inferred from a perusal of the literature in this field during the past two decades. Certain obscure conditions relating to virus infections and simulating acute surgical conditions of the abdomen have been reported. Butsch and Harberson [7] recently reported a series of 50 cases of an acute virus infection with nerve root involvement simulating appendicitis. Of this group 13 were operated on and normal appendixes were removed. Further study revealed a definite syndrome characterized by an abrupt onset of abdominal pain, nausea and vomiting. Aggravation of the pain by coughing or deep inspiration was noted. The authors' diagrams reveal the areas where the abdominal pain and tenderness were found; namely, on the right side at the level of the umbilicus, next in the right subcostal border and right lower quadrant, and lastly in the epigastrium and left subcostal regions. These cases occurred during the summer and fall months. Laboratory findings were not significant. A punctate erythematous edema of the palate was noted in most of their patients. It is conceivable that closely related viral agents might be responsible for the striking similarity in the clinical manifestations between this syndrome and that of epidemic pleurodynia.

SUMMARY

A survey of the clinical and epidemiologic aspects of an outbreak of 75 cases of epidemic pleurodynia reveals that its role as a communicable, incapacitating disease, contributing to economic loss through absenteeism and simulating more serious medical and surgical conditions, should not be underestimated.

360 West California Avenue, Memphis 5.

7. Butsch, W. L., and Harberson, J. C.: Virus Infection with Nerve Root Involvement Simulating Appendicitis, J. A. M. A. **123**: 405-407 (Oct. 16) 1943.

The Rise of American Gynecology.—From a practical point of view, gynecology of the nineteenth century was essentially American. The superb contributions of Ephraim McDowell (1771-1830), James Marion Sims (1813-1883), the Atlee brothers and Thomas Addis Emmet (1828-1919) solved several of the major therapeutic problems of this specialty. To these we may add the names of other surgeons who ventured to invade the pelvis during the preantiseptic days: Nathan Smith (1762-1829) of Yale, John Lambert of Richmond, François Prevost (1764-1842) of Louisiana, William Gibson of Baltimore, Alban G. Smith of Kentucky, Gilman Kimball (1804-1892) of Massachusetts, David L. Rogers of New York, J. C. Warren of Boston, J. Bellinger (1804-1860), A. Dunlap (1815-1894), Nathan Bozeman (1825-1905), E. R. Peaslee (1814-1878) and D. Hayes Agnew (1818-1892). Daring indeed were John King and his fellow townsmen T. Gaillard Thomas and A. J. C. Skene (1837-1900) for their deliberate performance of a laparo-elytrotomy. George Osgood reported a laparotomy for extrauterine pregnancy in 1802, and in the following year David Ramsay (1749-1815) of Charleston reported a similar operation. In 1816 John King of Edisto Island, South Carolina, performed a remarkable operation for abdominal pregnancy, saving both mother and child by cutting through the walls of the vagina and applying forceps, with abdominal pressure exerted on the fetus. He afterward expanded his account of the operation with his observations into a volume of one hundred and seventy-six pages and published it at Norwich, England, in 1818. Joseph Pancoast (1805-1882) of New Jersey was the first to perform a successful plastic operation for exstrophy of the bladder. This operation was repeated with success on the female bladder by Daniel Ayres of Brooklyn (1822-1892) in November 1858.—Ricci, James V.: One Hundred Years of Gynaecology, Philadelphia, Blakiston Company, 1945.

IS SURGERY INDICATED IN ALL CASES OF NODULAR GOITER, TOXIC AND NONTOXIC?

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From an analysis of the data presented in this paper we believe the following two theses to be true:

1. All nontoxic nodular goiters—single and multiple—should be removed surgically because of the high incidence of unsuspected cancer, a rate which exceeds that of cancer of the breast in the clinically benign appearing group.

2. Toxic nodular goiters should be removed surgically and should not be treated with thiouracil.

Two recent papers [1] have emphasized the high incidence of malignant degeneration in nodular goiters. Ward [1] presented an incidence of 4.8 per cent in 3,539 nodular goiters of both sexes. In males the incidence was 11 per cent and in females 4.0 per cent. Cole and his associates [1] showed the incidence of carcinoma in 523 nodular goiters (including toxic, nontoxic, benign and malignant) to be 7.2 per cent. However, a breakdown of their cases revealed the following extraordinary facts: In 193 cases of nontoxic nodular goiter there was an incidence of 17.1 per cent of carcinomas, while in the group of nontoxic solitary nodules 24 per cent were the seat of carcinoma.

We reviewed the cases of nodular goiter in which we operated during the past five years and after eliminating all the cases in which the diagnosis of carcinoma was made preoperatively and confirmed pathologically we were left with 184 cases of clinically benign nodular goiters (some were toxic and some nontoxic) which showed an incidence of 7.6 per cent of cancer on pathologic examination. This figure is in close agreement with that of Cole and his associates.

We believe that an incidence of 7.6 per cent of cancer in cases of apparently benign nodular goiters is a compelling reason for operative removal of all such nodules unless a strong contraindication exists. To reinforce this thesis we have made the following study on breast tumors. It is generally agreed among internists and surgeons that biopsies should always be taken of a "lump" in the breast, followed by a radical mastectomy if proved malignant. This policy holds, regardless of how innocent clinically the "lump" may seem.

At the New York Hospital the following data were accumulated: Two hundred consecutive pathologic specimens of breast lesions were studied, and it was observed that 140 (70 per cent) of them were benign, and 60 (30 per cent) were malignant. The charts of 30 consecutive malignant cases then were reviewed and it was evident from the clinical data that only 5 out of 30 cases were considered benign. The remaining 25 cases clinically exhibited the characteristics of cancer. Therefore out of every 75 lesions clinically benign only 5 are proved to be malignant on biopsy by the pathologist—an incidence of 6.7 per cent. Yet no one would criticize the policy of routine biopsy of a "lump" or mass in the breast, as reference to the accompanying

1. Ward, R.: Malignant Goiter, Surgery **16**: 783-803 (Nov.) 1944. Cole, W. H.; Slaughter, D. P., and Rossiter, L. J.: Potential Dangers of Nontoxic Nodular Goiter, J. A. M. A. **127**: 883-888 (April 7) 1945.

table will show. Hence we feel that the same attitude and policy is justified when one is dealing with a nodular goiter whether solitary or multiple, nontoxic or toxic. The operation on the thyroid gland performed by a surgeon experienced in thyroid surgery is not dangerous, entails only three to four days' hospitalization and in the nontoxic group should be without mortality. The technic of thyroidectomy and our experience with the nontoxic nodular goiters will be published elsewhere.

The second thesis, i. e. thiouracil should not be used in cases of toxic nodular goiter, is based on the practical grounds outlined in the first thesis and on the theoretical grounds to be discussed.

Broders and Parkhill [2] stated recently that "microscopically the thyroid gland in cases of Graves' disease treated with thiouracil shows extreme hyperplasia with heightened epithelium, marked papillary infolding, and mitosis in the epithelial cells." And again the same authors state that "the thiouracil goiter is more of a cellular hyperplasia with mitosis very much in evidence, and so therefore more comparable to a carcinoma of the thyroid." Bielschowsky [3] has reported the unusual finding that the carcinogenic agent 2-acetaminofluorene which produces a wide variety of cancers in the rat fails to produce any such change in the thyroid gland unless thiourea is administered simultaneously. In that case adenomatous or anaplastic invasive epithelial tumors of the thyroid gland may develop.

Incidence of Clinically Unsuspected Cancer in Breast and Thyroid Nodules

	Number of Cases	Number of Cancers	Per Cent
Breast	75	5	6.7
Thyroid	184	14	7.6

In a recent editorial in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION [4] attention was drawn to these experimental findings of Bielschowsky and the possible significance of the use of thiouracil in man for the treatment of hyperthyroidism. Ward [1] has stated that carcinoma occurred in only 1 instance in his series of 1,900 toxic diffuse goiters; hence the potential danger of thiouracil in this group of hyperthyroid patients is slight. On the other hand, because of the facts presented in thesis 1, i. e. 7.6 per cent of clinically benign nodular goiters are malignant, and because of the observations of Broders and Parkhill and of Bielschowsky, we feel that thiouracil is contraindicated in the treatment of toxic nodular goiter and that operative intervention should be employed.

CONCLUSIONS

1. All nontoxic nodular goiters should be removed surgically because of the relatively high incidence of unsuspected cancer.

2. Thiouracil is contraindicated in the treatment of toxic nodular goiter and operative intervention is the treatment of choice.

130 East 79th Street.

2. Broders, A. C., and Parkhill, E. M.: Diffuse and Adenomatous Goiter and Goiter Induced by Various Agents, Surgery **16**: 633-646 (Nov.) 1944.

3. Bielschowsky, F.: Distant Tumors Produced by 2-Aminofluorene and 2-Acetylaminofluorene, Brit. J. Exper. Path. **25**: 1-4 (Feb.) 1944.

4. Thiourea and Experimental Carcinogenesis in the Thyroid, editorial, J. A. M. A. **127**: 278-279 (Feb. 3) 1945.

IMMEDIATE CARE OF THE WOUNDED THORAX

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The experience which has been gained in the early preoperative care of severe thoracic battle casualties can, in large measure, be applied to the primary management of thoracic injuries in civil life as well. As far as this is true the following presentation may help to place such therapy on a firmly established basis in civil practice. The discussion is based on work in the Mediterranean and European theaters over a period of two and one-half years by us and our colleagues of an auxiliary surgical group.

First aid treatment of the thoracic casualty is initiated on the battlefield by company aid men. These soldiers are taught that sucking wounds should be closed with a dressing large enough to stop the sucking noise, that a "stove-in" chest should be bandaged snugly, that the wounded man should be urged to cough if he has a rattle in his windpipe and that he should be transported in a sitting position if he has difficulty in breathing when lying down. Further treatment is given at the battalion aid station under the supervision of a medical officer. Here, dressings are adjusted when necessary and petrolatum gauze is packed in a sucking wound; morphine may be administered and plasma given. The patient receives a high priority for evacuation to a clearing station and thence to a forward mobile hospital. In civil life this type of therapy may be compared to the first aid treatment which can be given for thoracic injuries and accidental wounds occurring in the factory, on the street and elsewhere. In industrial organizations particularly the well trained first aid man should be able to initiate nearly all the therapeutic measures here enumerated.

When the thoracic casualty arrives in a forward hospital, preliminary appraisal is made of all wounds and of the patient's general status. Since many are in too poor condition to be x-rayed at once, the correct interpretation of physical signs becomes all important. Measures of resuscitation are immediately instituted which will either prepare the patient for surgery or make him more safely transportable. As soon as possible, roentgenograms are taken and the whole problem is reevaluated. The scheme of management described here is likewise applicable to civil practice. The measures are not first aid in nature and are to be instituted in a hospital under professional guidance.

GENERAL DIAGNOSTIC CONSIDERATIONS

Physical examination of the patient includes accurate localization of the external thoracic wounds and a projection of the probable course of the missile. Roentgenograms should consist of upright frontal and lateral views of the chest whenever possible. A flat plate of the abdomen is essential, owing to the high incidence of thoracoabdominal wounds and the frequency of gastric dilatation. Oblique projections and fluoroscopy are unnecessary in the preliminary survey. Later they may be required in localizing accurately certain foreign

From the Second Auxiliary Surgical Group.

bodies lying in the region of the diaphragm.[1] The course of the projectile is best determined by considering the external wound, identifying fractured ribs and visualizing the metallic fragment when present. As a general rule missiles travel in a fairly straight line. Deflections from the bony cage must be taken into consideration, and foreign bodies lying free in the pleural cavity may be misleading. Other presumably bizarre courses often may be explained by reconstructing the patient's position at the time of wounding.[2]

By plotting the course of the missile a general idea can be gained as to intrathoracic or thoracoabdominal damage. This is one of the first steps in planning what type of surgery may be eventually necessary. The possibilities of past or future hemorrhage may be more accurately appraised. The suspicion of extensive pulmonary or cardiac contusion will counsel a delay in surgery. Pulmonary contusion may be manifested either by scattered areas of hemorrhage bilaterally such as seen in "blast" injuries or by massive bleeding involving an entire lobe or more. Cardiac injuries are not always easy to diagnose and form a special problem both in resuscitation and in surgery. A general "washed-out" condition, sustained rapid pulse, transient irregularities of rhythm and the persisting need for oxygen have been indicative signs of cardiac injury. In contrast to civil practice, tamponade has been of rare occurrence. Even the development of tamponade has not been an absolute indication for surgical intervention, as aspiration alone has sufficed on several occasions. Continuing cardiac hemorrhage is justification for an early operation. Myocardial contusion, however, constitutes a serious risk for any type of operation. The patient tolerates surgery poorly during the first few hours and undoubtedly should be handled like a patient with an acute coronary occlusion. Unless absolutely necessary, all surgery should be postponed for at least twenty-four to forty-eight hours.

Careful examination of the abdomen always should be performed on thoracic casualties. A large number of patients with uncomplicated thoracic injuries develop acute gastric dilatation; decompression must be carried out immediately. Abdominal pain, tenderness and a silent abdomen on auscultation also may be complications of a purely thoracic wound. Although frequently difficult, early decision is required as to whether these signs are due solely to intercostal nerve damage or to intra-abdominal injury. In general, the abdominal spasm which accompanies a thoracic wound is likely to be unilateral and becomes less evident on inspiration. At times the results of anesthetic block of the intercostal nerves may be of aid. Following nerve block there are often cessation of pain and skin tenderness, but in the presence of peritoneal pathologic change some degree of spasm, rigidity and tenderness to deep pressure usually remain. In most instances, however, accurate determination of the track of the missile is the deciding factor.

RESUSCITATIVE MEASURES

The clinical estimation of shock is based on a systolic blood pressure below 100, an elevated pulse, pallor (or cyanosis), sweating, a lowered skin temperature and rapid shallow respirations. In most thoracic casualties cardiorespiratory imbalance and pain are the chief elements in perpetuating shock; hemorrhage frequently is a secondary consideration. With certain exceptions (intra-abdominal pathologic conditions, severely damaged extremities, continuing hemorrhage) there is no necessity for rushing a thoracic casualty to the operating room; often from six to twelve hours are utilized in resuscitation. In specific instances (extensive pulmonary contusion [blast] or myocardial contusion) at least twenty-four to forty-eight hours should elapse before even minor surgery is performed.

Actual resuscitation of the soldier with extensive thoracic wounds may be discussed under three headings: (I) correction of impaired cardiorespiratory physiology and relief of pain; (II) restoration of fluid balance; (III) early prevention of infection. Many of the procedures necessarily may be carried out almost simultaneously.

I. CORRECTION OF CARDIORESPIRATORY IMBALANCE

The following measures are concerned with bringing the thoracic wall, lungs, heart and mediastinum as close to a normal physiologic state as possible. Correction of cardiorespiratory imbalance frequently will bring the patient out of shock without the necessity for fluid replacement therapy.

Impairment of Thoracic Wall.—Often the first step in gaining physiologic restitution is accomplished during the first examination of the thorax. A poorly dressed sucking wound must be effectively occluded to prevent exchange of air. At the same time it may be convenient to evacuate a portion of the blood and air that have collected in the pleural cavity, particularly if the sucking wound is valvular in type. This is done by placing the patient in such a position that the wound is roughly dependent. During forced expiration and cough the wound is held open, and during inspiration the edges of the wound are approximated. Thus several hundred cubic centimeters of fluid and air may be rapidly removed. At the preliminary examination localized "flail" chest may be controlled by inducing quiet respirations through the use of regional nerve block. When flail chest and paradoxical motion are extensive, mechanical means of stabilization are necessary such as the use of small sand bags, positioning the patient with the affected side down or the use of firm adhesive strapping. Elevation of the ribs with external fixation by pericostal sutures or towel clips has not yet been necessary.

Thoracic Pain.—The relief of thoracic pain has a vital bearing on hastening recovery from shock. Anesthetic block of the intercostal nerves has proved the best means of relieving thoracic pain and has been used extensively.[3] Routinely a regional type of block is employed in preference to local infiltration at the injured site. The extent and contamination of wounds have dictated the former choice. When wounds are posterior and mesial, or when regional block has not given complete relief, paravertebral injections of the same nerves are done. By this technic it is probable that both the sympathetic chain and the intercostal nerves are infiltrated. In performing regional block the area of pain is outlined and 5 cc. of a 1 per cent solution of procaine hydrochloride is injected into each nerve at the angles of the ribs. Two nerves above and two below the painful area are usually included in the injection. It is difficult to describe adequately the immediate surcease from pain which many wounded receive from this therapy

1. Burbank, Benjamin; Burford, T. H.; Samson, P. C., and Mesirow, Sidney: Experience in the Localization of Thoracic Cage Foreign Bodies, J. Thoracic Surg., to be published.

2. Michels, L. M.: Preoperative Diagnosis of the Recently Wounded Abdomen, to be published.

3. Samson, P. C., and Fitzpatrick, L. J.: Intercostal Nerve Block: Its Role in the Management of Thoracic Casualties, California & West. Med. **62**: 254 (May) 1945.

alone. A patient who has been dyspneic and grunting with pain will become quiet and may often fall asleep within a few minutes. Adhesive strapping has not been satisfactory in relieving pain due to thoracic wounds. It is now reserved solely for the stabilization of flail chest which exhibits paradoxical motion.

Morphine for the control of pain must be administered with great caution in the resuscitation ward. The observations of Beecher [4] have been verified by all who have treated fresh battle casualties. It now appears that much of the morphine given in the combat area may remain largely unabsorbed because of the slowed peripheral circulation due to shock and cold. During resuscitation quantities of unabsorbed morphine may be picked up by an improving circulation. This has resulted in acute morphine intoxication on a number of occasions. Similar occurrences may be expected in civil practice. In thoracic casualties particularly, overmorphinization has a deleterious effect in depressing respiration and dulling the cough reflex. When morphine is indicated for shock patients it should be given intravenously in doses not to exceed 1/8 to 1/6 grain (8 to 11 mg.).

Anoxia.—In patients with extensive thoracic wounds severe degrees of anoxia are made manifest by extreme restlessness, apprehension, sustained rapid pulse and dyspnea with or without cyanosis. Thoracic pain is often a contributory factor. Anoxia usually has been due to a combination of causes: reductions in vital capacity, anemia and cardiac injury. Again, morphine must be used with caution if at all, since respiratory depression will increase the anoxia. Pain is relieved by nerve blocks; oxygen should be given at once by nasal catheter or mask at not less than 7 liters per minute. This will act as supportive therapy until the lungs can be partially reaerated and blood administered. There must be no delay in commencing oxygen, as a manic stage of restlessness has been observed to be the immediate precursor of death in several instances. As a general supportive measure oxygen should be used early and freely on any patient who is restless or dyspneic or whose pulse remains elevated. Cyanosis is a late manifestation of anoxia, and oxygen should be administered before it develops.

Hemothorax.—This is the most frequent complication of intrathoracic injury. A large hemothorax or hemopneumothorax may reduce the vital capacity to dangerous levels. If the pleural cavity appears to contain more than 500 cc. of fluid or if the patient is dyspneic and there is cardiac and mediastinal shift to the opposite side, thoracentesis should be done. As much blood is removed as can easily be obtained up to 1,000 cc., or up to the point that the patient complains of tightness in his chest. If the blood is presumably uncontaminated and less than twenty-four hours old it may be used for an autotransfusion. Changes in roentgenographic and physical signs following thoracentesis will give an indication as to further bleeding. It is difficult to generalize on how much bleeding constitutes life endangering intrathoracic hemorrhage. Bleeding of such severity from the pulmonary parenchyma is exceedingly rare. We have found the following criteria to be the most reliable guides to serious continued hemorrhage: (1) a blood pressure which fails to rise with apparent adequate blood transfusion as high as 2,000 cc. or, having risen to relatively normal levels, falls again; (2) reaccumulation of 1,500 to 2,000 cc. of blood in the pleural cavity within twenty-four hours of the initial aspiration of a similar large amount; (3) persisting severe anemia in spite of blood replacement, as determined by serial hematocrit readings.

Excessive Bronchopulmonary Fluids—"Traumatic Wet Lung." [5]—Inadequate tracheobronchial evacuation of excessive secretions and blood has been observed in varying degrees of severity from a few hours up to seven days after injury. Wet lung is a frequent complication of thoracic trauma and has occurred following fractured ribs, parietal and intrathoracic wounds and pulmonary blast injuries. During the immediate posttraumatic period the complication may be serious and, when unrecognized, has been directly responsible for death. Its presence always increases the surgical risk. The most common symptom is a frequent "wet," painful cough. Oral wheezes are prominent and rhonchi are heard constantly over one or both sides of the chest. The cough is noneffectual in that only small amounts of sputum are raised and the bubbling character of the respirations persist. Blood and tenacious mucus form the bulk of the obstructing fluid. Purulent exudate signifies a preexisting bronchitis. Acute massive collapse of the lung has been seen only twice. On both occasions it was due obviously to obstruction of a main bronchus.

The aim of treatment is to improve bronchopulmonary drainage. Any surgery ordinarily should be postponed until an adequate airway can be maintained. Morphine in large amounts and sedative cough mixtures are expressly contraindicated. Thoracic pain is relieved by nerve block [6] and voluntary cough is urged. Oxygen is given if the patient's pulse remains elevated or if he becomes cyanotic. Should the patient be unable to cough effectively because of physical exhaustion, or should excretions continue to flood the bronchi overwhelmingly, mechanical suction is resorted to without delay. Either tracheobronchial catheter aspiration [7] or bronchoscopy is employed. Suction may be necessary at hourly intervals. A catheter may even be left indwelling in the trachea and oxygen administered through it between aspirations. Catheter suction is a valuable procedure in that the materials are readily available, the technic is simple and no topical anesthesia is required. Bronchoscopy is more efficient and may be performed twice daily without ill effect. If the secretions are frothy and fine rales are heard, intravenous atropine in doses of 1/100 grain (0.65 Gm.) may be beneficial. In such cases oxygen given under positive pressure also has been of value.[8]

Pressure Pneumothorax.—While infrequent, this complication may be serious and even fatal if unrecognized. The diagnosis is based on the findings of dyspnea with or without cyanosis, a hyperresonant hemithorax, absent breath sounds and a shift of the heart and

4. Beecher, H. K.: Delayed Morphine Poisoning in Battle Casualties, J. A. M. A. **124**: 1193 (April 22) 1944.

5. Burford, T. H., and Burbank, Benjamin: Observation on Certain Physiologic Fundamentals of Thoracic Trauma, J. Thoracic Surg., to be published. Samson, P. C., and Brewer, L. A., 3d: Principles of Improving Inadequate Tracheobronchial Drainage Following Trauma to the Chest, ibid., to be published. Brewer, Burbank, Samson and Schiff.

6. Fitzpatrick, L. J.; Burbank, Benjamin, and Adams, A. J.: Nerve Block in the Treatment of Traumatic Wet Lung, J. Thoracic Surg., to be published.

7. Haight, C., and Ransom, H. K.: Observations on the Prevention and Treatment of Postoperative Atelectasis and Bronchopneumonia, Ann. Surg. **114**: 243 (Aug.) 1941. Dolley, F. S., and Brewer, L. A., 3d: Chest Injuries, ibid. **116**: 668 (Nov.) 1942. Samson, P. C.; Brewer, L. A., 3d, and Burbank, Benjamin: Tracheobronchial Catheter Aspiration: Indications and Technique, Bull. U. S. Army Med. Dept., to be published.

8. Brewer, L. A., III; Burbank, Benjamin; Samson, P. C., and Schiff, C. A.: Experiences with "Wet Lung" in War Casualties, to be published.

mediastinum to the opposite side. The most frequent acute traumatic cause of pressure pneumothorax is pulmonary laceration in which the bronchial opening acts as a check valve. During inspiration gradually increasing amounts of air are trapped in the pleural cavity. Pressure pneumothorax may result from the ingress of air through the thoracic wall in patients with sucking wounds. As already described, this may be relieved easily when the wound is dressed. A third but rare type of pressure pneumothorax develops as the result of small perforating wounds of the subglottic larynx or cervical trachea. Air dissects along the fascial planes of the mediastinum and may break into one or both pleural cavities. In these cases an early, low tracheotomy to short circuit the air stream is mandatory.

In the purely emergency treatment of any pressure pneumothorax a large-bore needle should be inserted in an upper anterior intercostal space and attached to a water-trap bottle. A short transfusion cannula with attached flange is excellent for this purpose. The needle should not be left indwelling for more than a few hours. If air continues to bubble through the water-trap system or, if examination shows that the lung is not expanding, a No. 16 to 18 catheter is to be substituted for the needle. The tip of the catheter is inserted just within the pleural cavity and likewise attached to a water seal. The lung will expand only if the caliber of the drain is larger than the caliber of the bronchial opening; frequently the catheter will be successful in controlling the pneumothorax when a needle has failed. No patient with pressure pneumothorax should be transported with a needle in his chest or with any type of attached water-trap drainage. When evacuation is necessary a flutter valve (long penrose tubing or condom with small distal slit) is attached to the catheter.

Mediastinal Emphysema.—This condition occasionally has been diagnosed roentgenographically. The most frequent clinical sign is the presence of a precordial crunch or click which is synchronous with the heart beat. In our experience it has not been of clinical significance and no case of increased mediastinal pressure has developed. Mediastinal emphysema has followed wounds of the hilar bronchi, trachea and subglottic larynx. Control of the pressure pneumothorax which almost always complicates these injuries has stabilized the patients sufficiently to permit operation. Suprasternal incisions into the deep fascial planes might rarely be necessary as an emergency measure. The absence of old pleural disease and the lack of pleural thickening and adhesions in nearly all individuals in the Army probably explains the ease with which air in the mediastinum dissects into the pleural cavity.

II. FLUID REPLACEMENT

For the most part intravenous therapy is limited to blood; plasma may be started at once while blood is being cross matched. Serial red cell counts and hematocrit readings have been of value in determining the degree either of anemia or of hemoconcentration, and the response to replacement therapy. Intravenous crystalloids are employed but rarely and only when there is evidence of dehydration. Besides laboratory findings, the amount of blood given is based on the patient's improvement following the first 500 cc. and on the minimum known loss (thoracentesis). Unless there has been obvious exsanguination it is better to slow the rate of administration after rapidly giving the first 500 cc. Occasionally a continuous transfusion of 1,500 to 2,000 cc. is necessary, but this should be given over a period of hours. Large transfusions rapidly administered are not well tolerated by an injured lung or heart. This is particularly true of severe pulmonary blast; in some instances the flooding of these patients with blood has precipitated acute pulmonary edema and thus become an undoubted factor in the fatal outcome.

III. THE EARLY PREVENTION AND CONTROL OF INFECTION

All battle wounds are contaminated wounds. This is equally true of compounded injuries which are incurred in civilian life. In either situation the prevention of infection is highly desirable, particularly when the wound or injury communicates with the pleural cavity. It has been routine practice to "dust" battle wounds with sulfanilamide in the combat area, and many soldiers have taken 3 or 4 grams of a sulfonamide orally before arriving at a forward hospital. Unfortunately it is impossible to say that sulfonamide therapy has materially reduced the percentage of early wound infections. Although the incidence of generalized sepsis is low, soldiers whose initial surgery has been unavoidably delayed still present an appreciable number of infected wounds. At present, all but those with minor wounds receive penicillin on admission to a forward hospital. It is given intramuscularly every three hours. If the patient is septic on arrival the initial dose is given intravenously. If there is evidence of early intrapleural infection penicillin is instilled into the pleural cavity at least once during the period of resuscitation. While believed an important adjunct, chemotherapy has not been accepted as a substitute for adequate initial excision of devitalized tissue by surgeons in the Mediterranean theater.[9]

Careful handling of the wound in a forward hospital is a factor in the prevention of infection. While it is frequently necessary to examine thoracic wounds preoperatively, several changes of dressings by different individuals must be condemned. A single inspection under sterile precautions nearly always suffices. When reapplied the dressing should not be so large that it will be disturbed by thoracentesis or subsequent examinations of the thorax.

SUMMARY

1. A rational plan has been adopted for the early preoperative care of the severe thoracic casualty in forward hospitals.

2. This program is applicable whether one is dealing with war wounds or with the thoracic injuries and wounds which may be encountered in civil and industrial practice.

3. Adequate resuscitation is a necessary preparation either for surgery or for transportation. Unless hemorrhage or the urgency of other wounds dictates early surgical intervention, the majority of serious thoracic casualties will be greatly benefited if they are not rushed to the operating table.

4. Patients with extensive contusions of lungs or heart are poor risks, and surgery in these patients should be delayed whenever possible.

5. Methods of resuscitation are (1) restoration of normal thoracic physiologic conditions including the control of pain and the treatment of hemothorax, "wet

9. Churchill, E. D.: The Surgical Management of the Wounded in the Mediterranean Theater at the Time of the Fall of Rome, Ann. Surg. **120**: 268 (Sept.) 1944.

lung," anoxia and pressure pneumothorax, (2) fluid replacement and (3) early prevention of infection.

6. Oxygen should be freely used, preferably before cyanosis develops, for any patient who is restless or dyspneic or whose pulse remains elevated.

7. Caution should be observed in the administration of morphine in the resuscitation ward.

8. The "therapeutic triad" most commonly employed for improving thoracic dysfunction consists of nerve block for the control of pain, thoracentesis and water-trap catheter drainage for intrapleural pathologic changes and mechanical suction (catheter aspiration, bronchoscopy) for the removal of excessive bronchial fluids.

CONCLUSIONS

The development of an integrated system of "thoracic" resuscitation in forward hospitals has paid excellent dividends in lives saved and morbidity reduced. We would be remiss if much of the information thus gained was not applied to the solution of similar problems in civilian practice. Early contact with many wounded soldiers has served to emphasize the fact that clinical shock is perpetuated by disturbances of cardiorespiratory equilibrium. Continued experience has strengthened the concept that patients with severe thoracic wounds should be resuscitated thoroughly, that time itself plays an important role and that, with few exceptions, nothing is gained and often much is lost by hurriedly submitting the thoracic casualty to the surgeon's knife.

PARTIAL OR INCOMPLETE DELIRIUM

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My first object in this paper is to describe a particular variety of delirium, one which differs from other varieties in the extent of the patient's disorientation: Whereas in other varieties the patient is disoriented in the three spheres of time, place and person, disorientation in the variety to be described is restricted to, or is most pronounced in, the sphere of time. Reasons will be given for regarding this variety as a rudimentary form of delirium, a "partial" or incomplete delirium, while that with disorientation in all three spheres is a severe or complete delirium. My second object is to show that in partial delirium the restriction of disorientation to the sphere of time is not a capricious and incomprehensible phenomenon but is understandable in the light of Hughlings Jackson's theories of nervous function and is indeed an especially clear illustration of the merit of those theories.

Three cases will serve as examples of partial delirium. It is needless to give complete clinical histories; the relevant details alone will be given:

CASE 1.—A man aged 56, while taking bromide for a mild depression, became delirious and was admitted to a mental hospital on April 10, 1934. The history, the findings and the outcome were typical of a bromide delirium.

At no time was he observed to be disoriented for place or person, and after his recovery he could not remember having ever been disoriented in these spheres. By contrast, there was conspicuous disorientation for time. Thus on April 12, 1934 he gave the date as March 12, 1934 and said he had been in the hospital ten days (really only three). On April 20, when asked to give the year, he replied doubtfully "'35, I guess"; when asked the month, he replied "May, ain't it?—the middle"; when asked the time of day, he said "It must be getting toward evening," though it was only 9 a. m. He recovered on or about April 22.

In case 1 disorientation was restricted to time. In cases 2 and 3 it was not restricted to, but was most pronounced in, that sphere.

CASE 2.—A woman aged 20, developing a bromide delirium while under treatment for a mild depression, entered the hospital on Sept. 1, 1937. She recovered on or about September 10.

At no time did she show disorientation for place. Disorientation for person was shown at home but never in the hospital. Disorientation for time, however, was present to an extraordinary degree, as in the following examples:

September 4: She thought it was May or June. She could not give the time of day; she guessed it was 3 or 4 p. m. and thought she had already had her lunch, though actually it was only 11 a. m. Questions pertaining to time confused her to an extreme. Though it was only her fourth day in the hospital, she estimated the length of her stay as "two or three months." When asked her age, she replied in a puzzled tone "About 4,000 years— (correcting herself) —26 or 28—30 years. . . . I don't know, I'd be about 4,000 years old, I guess."

September 8: She thought she had been in the hospital "about a month." She gave the date as Sept. 15, 1938.

September 9: She gave the day, the month and the approximate day of the month correctly but still thought it was 1938.

September 10: She was now well oriented. When asked the year she smiled and said "It's not '38 yet," remembering and deprecating her previous mistakes in this respect. With amusement she recalled thinking she was 4,000 years old and said "I imagined I was the oldest woman in the world." Before her admission she had been reading about Cleopatra, and she thought this must have been in the back of her mind.

CASE 3.—A woman aged 65 with cerebral arteriosclerosis was admitted to the hospital on Feb. 6, 1935 in a bromide delirium which cleared up a little over a month after admission.

Orientation for place was never disturbed. Orientation for person was disturbed only in the first few days in the hospital and then only occasionally. But orientation for time was strikingly poor. On February 9 she said it was the middle of January 1934. Though it was only her fourth day in the hospital she said she had been there "three or four weeks." On February 14 she gave the month correctly but gave the year as 1900. On February 20 she said it was February 24; in trying to give the year she said "It's nineteen hundred and ——" and could not finish. On March 4, when she seemed much brighter, she gave the month correctly but said it was "about the 30th"; when asked the year she replied uncertainly "Is it 1935?" On and after March 15 she was clear and kept track of time without trouble.

Study of these and similar cases leads one to the conclusion that partial delirium is of a piece with complete delirium, from which it differs only in degree. In partial just as in complete delirium the patient is lacking in alertness and is restless, apprehensive, deluded and hallucinated. The toxemias and other causes of complete delirium are found also in partial delirium.

Since partial delirium appears to be a rudimentary delirium, the question arises: Does the former ever occur as a preliminary stage in the evolution of a complete delirium? Evidence on this point is hard to get, since the physician confronted with a case of partial delirium must try to cure it rather than allow it to advance. But if there is scant opportunity to study

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the waxing of delirium, there is ample opportunity to study its waning. Such study shows that the completely delirious patient, in recovering, sometimes passes through a clearly definable period of partial delirium; this is shown by cases 4 and 5:

CASE 4.—A man aged 76, a heavy drinker, was admitted to the hospital on Nov. 13, 1935 in a severe delirium brought on by cardiac decompensation and by morphine taken to allay certain nervous symptoms which had followed the sudden withdrawal of alcohol. On admission he was disoriented in all spheres. In recovering he became oriented for place and person over two weeks before he became oriented for time. On November 16 he became permanently oriented for place and person. Yet on November 19 he gave the year as "'36." Next day he could not give the month or year. On November 27 he gave them as January 1996. On November 29, when asked the year, he replied "It's '29—oh wait, no, that's wrong—well (helpless and embarrassed), I give it up." On December 4, for the first time, he was fully clear and remained so ever after.

CASE 5.—A man aged 85 was admitted to the hospital on Feb. 1, 1936 in a complete delirium, the immediate causes of which could never be established with certainty. The case is none the less instructive because of the order in which the symptoms disappeared in the course of his recovery. On February 4, his fourth day in the hospital, he became oriented for place and person and remained so ever after. By contrast, orientation for time was not restored until at least twenty-two days later. Thus on February 4 he said it was the end of February 1919. On February 17 he gave the year as 1937. On February 26 he gave the date as March 2, 1836. He was not questioned again as to time until March 18 when he gave the date as March 16, 1936, which is within normal limits. Thereafter he remained clear.

Cases 4 and 5 show that in recovering from a complete delirium some patients become oriented for place and person long before they become clear as to time. This of course does not happen in every case, for in many cases orientation is restored in all three spheres simultaneously. It is significant that patients 4 and 5 were very old, 76 and 85 respectively. This may explain why their recovery was so gradual. One of the signs of old age is a reduction in the speed with which the brain rallies from the effects of a poison. Hence in a group of elderly people recovering from delirium some cases may offer a "slow motion picture" of the process of recovery.

The following conclusions have been reached: There are two degrees of delirium—complete (with disorientation for time, place and person) and partial (with disorientation restricted to, or most pronounced in, the sphere of time). Partial delirium appears to represent an intermediate stage in the evolution of complete delirium; when it occurs, it may be taken for granted that the patient will in the course of time become completely delirious (provided, of course, the causes of his delirium have not been checked).

PATHOGENESIS OF PARTIAL DELIRIUM

Why, in partial delirium, should the sphere of time bear the brunt of the disorientation? Light is thrown on this question by Hughlings Jackson's theory of the relative vulnerability of the more complex nervous functions. Jackson showed that, in disease of the nervous system, functions are vulnerable in proportion to their complexity: of the functions represented in a diseased area, the most complex are the most easily disturbed.

The recognition of time is a more complex function than that of place and person. The manner of determining the complexity of a function need not be discussed fully here; reference is made to an earlier paper.[1] One criterion, however, may be mentioned: Lateness of appearance is one measure of the complexity of a nervous function. As the brain matures, higher and higher pathways are laid down, and, correspondingly, more and more complex functions and abilities make their appearance. As every parent knows, children learn to recognize places and persons long before they learn to keep track of time. This is in keeping with the relative difficulty of these tasks. For one thing, persons and places are concrete—they can be seen and touched—while time is abstract. For another, persons and places seldom change, if ever, while time on the other hand is never constant; a particular person is always "Mother," a particular building is always "Jimmie's house," but today is not always Monday. To comprehend an abstract ever changing thing like time presupposes a higher degree of cerebral growth than to recognize concrete and relatively immutable things like places and persons.

It is therefore possible to understand why, in partial delirium, it is the sphere of time that bears the brunt of the disorientation. Orientation for time, the most difficult and complex of the three varieties of orientation, is for that reason the most easily disturbed. The last to be acquired, it is the first to be lost and the last to be regained.

SUMMARY

There are two degrees of delirium, complete and partial, the difference being in the extent of the patient's disorientation. In complete delirium there is disorientation in the three spheres of time, place and person; in partial delirium disorientation is restricted to, or is most pronounced in, the sphere of time. Partial delirium appears to represent an intermediate stage in the evolution of complete delirium; when it occurs, it may be taken for granted that the patient will in the course of time become completely delirious, provided the causes of his delirium have not been checked.

The recognition of time is a more complex function than that of place and person. Therefore the relative ease with which orientation for time is disturbed is in keeping with the teachings of Hughlings Jackson, viz. that in uniform dissolution of the nervous system functions are disturbed in proportion to their complexity, the most complex being disturbed first and most.

ABSTRACT OF DISCUSSION

DR. JOHN C. WHITEHORN, Baltimore: Major Levin has called attention to the special difficulty of keeping oriented in time—a difficulty which is demonstrated in his clinical case records by the occurrence of temporal disorientation in mildly delirious patients. He pushes his generalization to an unconfirmed absolute in stating that "it may be taken for granted that the patient (temporally disoriented) will in the course of time become completely delirious, provided the causes of his delirium have not been checked." While disorientations as to time, place and person, when demonstrated, are clear and simple clinical indications of delirium, one encounters not infrequently mildly delirious patients whose delirious condition is manifested, not in clearly describable disorientation, but in misinterpretations of complex situations and inaccurate identifications, apparently determined in part by emotional attitudes. Is it the author's intention to brush aside such clinical complexities in favor of a sharply simplified neurologic schematization? If so, then he is proposing essentially a simplified redefinition of delirium. The material presented is suggestive but does not appear to me adequate to establish the utility or validity of such a redefinition.

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1. Levin, Max: Degrees of Automatic Action: Some Psychiatric Applications of Hughlings Jackson's Concept of "Reduction to a More Automatic Condition," J. Neurol. & Psychopath. **17**: 153-175, 1936.

DR. WENDELL MUNCIE, Baltimore: Dr. Levin has called attention to a clinical phenomenon often enough encountered; namely, the increased frequency with which time disorientation occurs relative to place and person disorientation. His explanation that orientation for time is more complex and more recently acquired developmentally than are the two other varieties of orientation would seem to fit in with the facts of child development. That this presupposes a higher hierarchy of functions in the Hughlings Jackson sense does not follow. The child orients himself for person and place perhaps because these items are more loaded with symbolic significance for his welfare, in the terms that he recognizes that function to be. Actually "time" to the infant is an item in the essential bodily rhythms of waking—sleep, quiescence and peristalsis, and so on, thus having a function as an integral part of the vegetative processes. Probably because of this it comes to have symbolic value as an element in orientation only late in development and then to a large extent by the impression from external sources of the need and desirability of order. In these senses, then, place and person orientation may be the more firmly grounded because it appealed to and fitted in earlier and more strongly with the infants' psychobiologic needs. Direct recognition of this fact may be further seen in the care given to all sorts of hospital patients—as well as delirious ones—namely, we attempt to further the sense of security of the patient by providing him with a relatively constant environment. We do not change rooms and nurses frequently if it can be avoided. It is less important to have a clock and a calendar in the patient's room. All this argument may offer only a teleological explanation of what Hughlings Jackson postulated in neurologic terms. What may be said for those patients who show disorientation for self (with parts of the self) and/or others for place, but in whom time appreciation is relatively unimpaired? According to the best information to date, such disturbances follow on localized lesions and are related to the classic agnosias and apraxias. This gets into a most complicated field, far from being satisfactorily explored. As far as I know, time appreciation has never been so linked with the agnosias and apraxias. Perhaps Hughlings Jackson would say this offers only further proof of his contention that the earlier the functional development, the more basically is it laid down in structure. The concept of delirium basically rests on demonstrable clouding of consciousness with difficulty in grasp. Disorientation then is only one of several features. Accordingly, the title of the paper might better have been "Delirium with Partial and Selective Disorientation."

Clinical Notes, Suggestions and New Instruments

RECURRENT HEADACHE RESULTANT FROM MALARIA

COMMANDER ABRAHAM KAPLAN (MC), U.S.N.R.

Headache is a common symptom, due to many causes. This report focuses attention on a type of headache which will present itself with increasing frequency as more of our personnel who served in the Pacific combat areas are demobilized.

REPORT OF CASE

History.—C. B. R., a Marine corporal aged 36, was admitted to sick bay because of recurrent headaches. As a youngster he was knocked out while boxing and fainted once a few days later. When he was 17 years old he enlisted in the U. S. Marine Corps and two years later was given a BCD (bad conduct discharge) for falling asleep at his post while on guard duty. In April 1942 he reenlisted in the U. S. Marine Corps. Fifteen months after the second enlistment he was transferred from a ship to a nearby hospital ashore because of pain of the right arm of two months' duration. At the hospital it was learned that when he was 12 years old he was struck with a rifle over the right upper arm and since then a "lump" remained at this site. The "lump" gave him no trouble until two months previously, when he first discovered pain and discomfort on motion. Examination showed a firm, moderately tender tumor about 10 cm. in diameter at the upper end of the right humerus. The tumor seemed attached to the bone but in no way interfered with motion. X-ray films of this region showed a bony growth about 8 cm. in length distal to the articular surface of the head of the humerus. It had the appearance of a benign osteochondroma. After one week in the hospital the symptoms subsided and he was discharged to duty.

Present Illness.—In December 1943 he was admitted to the ship's sick bay in a delirious condition. It was known that he had consumed large quantities of alcohol. He was given 3 grains (0.2 Gm.) of amytal and transferred to a nearby hospital ashore. On the following morning he was fully oriented and freely admitted drinking alcohol to excess but denied being addicted to liquor. For three weeks he had been troubled with occipital headaches which were so severe that he was unable to sleep and to get some relief he took to drink.

Physical and neurologic examinations were completely negative. The spinal fluid studies showed an initial pressure of 175 mm. There was no evidence of block and no increase in cells, sugar, chlorides or protein. The blood and spinal fluid Kahn tests were negative. Other laboratory studies, including x-ray of the skull, were negative. X-ray films of the mandible, however, showed suspicious rarefied areas in the region of the second and third molars. These teeth were extracted, but the extractions did not result in any improvement in the headaches. Repeated eye, ear and sinus examinations failed to reveal any pathologic condition that could account for the severe occipitovertical headaches. Routine blood studies as well as studies of blood calcium, blood phosphorus and sedimentation rate were negative. The basal metabolic rate was minus 15. Dehydration did not influence the severity or the frequency of the headaches. Check x-ray studies of the right humerus showed no evidence of any malignant change. After two months of hospital study, observation and treatment, during which time there was no subjective improvement, the patient requested that he be returned to duty. He was therefore discharged.

He returned to his station and after five days' trial of duty he was found to be of little value to his command. During this interval the headaches continued unabated; he became dejected and morose and stayed awake almost all night. He was therefore returned to the hospital for further investigation and disposition.

Examination again failed to show any abnormal physical or neurologic signs. The psychiatrist made the following note: "The patient is not as alert as he was several months ago. He seems to have deteriorated in his emotional fields and shows psychomotor retardation but no true depression. The case is a complicated one, presenting schizoid features but not manifest dementia precox. He is unfit for duty. The condition may be an incipient psychosis, but there is insufficient evidence at hand at this time to make such a diagnosis. I suggest the diagnosis of psychoneurosis, war neurosis, and recommend transfer to a hospital on the mainland for disposition."

While waiting for transfer it was noted that the patient rarely smiled, took little interest in his surroundings and spent most of his time in his bunk. Two months later he arrived at a hospital on the mainland.

He still complained of headaches, but they did not seem so severe. Repeated physical and neurologic examinations as well as laboratory studies were negative. The report of his mental status was as follows: "The patient has definite psychomotor retardation; he is listless, introverted and emotionally unstable. He has an earnest desire to remain in the service but has demonstrated a lack of energy and determination to fulfil this desire when it was granted on a previous occasion. The patient appears dejected and unhappy, but no depression is manifested. It is questionable whether this man can adjust himself even to limited duty, but, if observation warrants, a try at limited duty is recommended."

The patient was granted one month leave. He returned anxious to go back to full duty and was therefore granted another try.

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For nine months during his stay on the mainland he managed to carry on his duties in spite of recurrent headaches. He was then returned to the Pacific area, where the headaches continued for eight months and during the month before admission they became increasingly severe. For six months he lost weight steadily. Ten days before admission he started to have chills and fever recurring every second day.

A malarial smear was positive for Plasmodium vivax. The patient was given a thorough course of quinine and atabrine, with complete disappearance of the chills and fever and for the first time in years complete disappearance of headache. The diagnosis was chronic malaria.

COMMENT

The experience here described is not altogether unusual and has been reported in detail to illustrate the false leads that may be encountered in a similar case. Although detailed blood studies were made repeatedly, a smear for malaria was unfortunately overlooked. Malaria in the Pacific area is a common disease and will become much more common in the United States as more of our fighting men return from the zones where they were exposed to the Anopheles maculipennis mosquito. Malaria is also a "great imitator," and it will have to be included with greater frequency in the differential diagnosis of many diseases.

The finding of the malarial parasite in the circulating blood of a patient does not necessarily rule out other causes of disease. A negative blood smear or even several negative blood smears for malaria in a patient who has had or was exposed to malaria does not rule out the existence of the malarial parasite. During the past year we have had at least a dozen patients presenting only the symptoms of recurrent headaches in whose blood we repeatedly failed to find the plasmodium in carefully prepared blood smears. In these patients the administration of quinine sulfate 15 grains (1 Gm.) or epinephrine 2 minims (0.12 cc.) subcutaneously invariably resulted in the appearance of the malarial parasite in the blood stream within two to four hours after the medication was given. A blood smear taken during this interval clinched the diagnosis.

Council on Foods and Nutrition

SPECIAL ARTICLE

The present lack of agreement concerning the value of vitamin administration has indicated the need for an authoritative discussion on the use and abuse of vitamins. At the request of the Council Dr. Norman Jolliffe, a competent authority in this field, has prepared this report describing the proper use of vitamin preparations and commenting on practices which tend to bring them into disrepute.

GEORGE K. ANDERSON, M.D., *Secretary.*

THE PREVENTIVE AND THERAPEUTIC USE OF VITAMINS

NORMAN JOLLIFFE, M.D.
NEW YORK

Commercial exploitation of recent advances in the science of nutrition has led to some misinformation and confusion of the public concerning the proper use of vitamins. The author of a magazine article [1] has noted the bewilderment of laymen by dozens of mutually contradictory statements offered as proof that this or that vitamin preparation is better than all others. When a person buys a vitamin product as a panacea, it makes little difference whether he does so because of unbounded claims over the radio, in newspaper or magazine advertisements, syndicated health columns or magazine articles or by a druggist, a doctor or a friend; the expected miracle often fails to materialize. The resulting disappointment, multiplied many thousand times, may lead to a loss of public confidence and the eventual rejection of the good in scientific nutrition as well as the bad in its exploitation. Already there are indications that interest and faith in nutrition have begun to wane. Thus many editors, always sensitive to the public whim, are now jumping on the debunking band wagon by attacking indiscriminately both the good and the bad in the nutrition program.

Many people, with profit to themselves, turn to their physicians for advice on nutritional problems. Too often, however, the patient is further confused by such impatient counsel as "This nutrition stuff is the bunk"; "Vitamins are a racket"; "You eat a good diet, don't you?—Eat three square meals a day, including plenty of milk, meat, vegetables and fruit"; "Oh, take a vitamin capsule every day—any one, they are all the same." This type of injudicious advice may be more damaging to good nutrition than misinformation over the radio, since more people have faith in their physician than in a radio commercial. Sound information about the role of vitamins in nutrition thoughtfully presented can be the physician's valuable ally in maintaining his patients' health.

TABLE 1.—*Supplementary Vitamin Mixtures*

Vitamin A	4,000-5,000	international units
Vitamin D	400-800	international units
Thiamine hydrochloride	1-3	mg.
Riboflavin	2-3	mg.
Niacin amide	10-20	mg.
Ascorbic acid	30-100	mg.

Vitamin preparations may be divided into two large groups: the supplementary and the therapeutic. The supplementary preparations are those which, in the recommended daily doses, provide amounts of specific nutrients below therapeutic levels but sufficient as dietary supplements to insure an adequate intake of the specified nutrients. As a rule the formulas of the supplementary preparations supply in one dose or in divided doses the amounts of vitamins suggested in table 1. Whether a formula supplies the minima or the maxima of these levels, the indicated usage remains the same, that is, supplementary to the diet. The therapeutic vitamin preparations are those that provide levels in which the daily doses are sufficiently large to be of value in the treatment of deficiency diseases. These levels are usually three to five but may be ten or more times the minimum daily requirements. Supplementary as well as therapeutic preparations may consist of a single vitamin or combinations such as vitamins A and D, the B vitamins, the water soluble vitamins or a multiple vitamin formula of both water and fat soluble vitamins.

INDICATIONS FOR PRESCRIBING SUPPLEMENTARY LEVELS OF VITAMINS

The supplementary levels of vitamins are of use in helping to prevent diseases due to deficiency of the nutrients contained in the supplement. As listed in table 2, indications for such use occur whenever the diet is unsatisfactory from any of a variety of causes or when there is an increased requirement for vitamins. The supplementary formulas are definitely not appropriate when the patient has already developed a deficiency disease, as much higher levels are usually required for effective therapy.

1. Cunningham, R. M., Jr.: The Great Vitamin Scare, New Republic **112**: 287 (Feb. 26) 1945.

The physician will have little difficulty in recognizing the necessity for supplementing restricted or special diets and in infant feeding. Many, however, do not possess the time, inclination or information necessary to calculate a diet in terms of grams, milligrams or units of protein, minerals and vitamins. For most ordinary purposes this calculation is not necessary if a list of food groups, as shown in table 3, is used to check whether or not the patient eats at least the indicated minimum from each of the groups. A diet lacking in one or more categories, unless specially devised by an expert dietitian, is almost certain not to contain the National Research Council's recommended allowances of one or more of the essential nutrients. On the other hand, even the inclusion of a serving from each of the seven food groups does not definitely assure that the diet will be adequate. The check list is intended only as the simplest kind of guide for planning a satisfactory diet, and it should not be regarded as infallible. Not

TABLE 2.—*Indications for the Use of Supplementary Vitamin Formulas*

1. To supplement:
   (*a*) An unsatisfactory diet in the part of the general population that will not or cannot eat a satisfactory diet, or for those whose diets do not appear to be satisfactory.
   (*b*) Restricted diets, as in obesity, diabetes, gallbladder disease, peptic ulcer and food allergy or during illness, infections or some surgical conditions and in convalescence.
   (*c*) Special diets for food faddists.
   (*d*) Infant feeding.
2. For persons known to have an increased vitamin requirement, as in hyperthyroidism, pregnancy, lactation, fevers and delirum or during periods of unusual physical exertion.

TABLE 3.—*Check List for a Satisfactory Diet*

Include at least:
   (1) 4 eggs weekly.
   (2) 1 serving daily of citrus fruit, tomato or their juices, or fresh uncooked salad greens.
   (3) 1 quart of milk daily for children, with an extra source of vitamin D.
   1 pint of milk daily or its equivalent in cheese, for adults
   (4) 1 serving daily of lean meat, fish, poultry or seafood.
   (5) 1 serving daily of a cooked leafy green or yellow vegetable.
   (6) 1 serving daily of another vegetable or fruit.
   (7) 1 portion daily of enriched or whole grain bread or cereal.

all combinations from the seven groups will supply all the recommended nutrients. Moreover, even when the choice of combinations is originally satisfactory the diet may be rendered unsatisfactory by the destruction or loss of nutrients in cooking and serving, or by the additions of unusual amounts of vitamin deficient or poor foods such as refined cereals, sugar, many types of candy, cake and alcoholic or sweetened carbonated beverages. Practicality dictates that the physician prescribe supplementary vitamins whenever a patient is not regularly consuming a satisfactory diet. Some patients may sincerely try to eat a satisfactory diet but fail because of business, working or home conditions, or for other causes beyond their control. Others will not eat a satisfactory diet because of habits, fads or fancies, lack of necessary information [2] or sheer obstinacy. Even though an unsatisfactory diet may be lacking in other essentials than vitamins alone, for those people who do not or cannot regularly consume a satisfactory diet a proper vitamin supplement is indicated. While this is not as good as a completely satisfactory diet, it is the next best thing.[3]

INDICATIONS FOR PRESCRIBING THERAPEUTIC LEVELS OF VITAMINS

The therapeutic levels of vitamins are of use in the treatment of vitamin deficiency diseases and as drugs.[4] Successful treatment of nutritional deficiencies involves many factors other than giving vitamins: It involves careful diagnosis, the treatment and whenever possible elimination of conditioning factors, symptomatic treatment and finally the administration of nutritional therapy in sufficient amounts and over a sufficient period of time to evoke maximum reversal of the nutritional lesion.

The diagnosis of deficiency disease is frequently missed because it is not looked for. Nutritional deficiencies should be suspected in the following groups of persons:

1. Those whose diets indicate possible deficiencies.
2. Those who have conditioning factors known to increase the requirement, destruction or excretion of vitamins or to interfere with their digestion, absorption or utilization.
3. Those complaining of certain symptoms which, while not diagnostic, are often associated with deficiency disease.

The mere fact that a person falls into one or more of these groups does not in itself justify the diagnosis of a nutritional deficiency disease. That is made only in the presence of anatomic, chemical or physiologic alterations characteristic of deficiency disease which have been evaluated in the light of the history and of clinical and laboratory findings.

Adequate nutritive therapy does not consist in giving only the nutrients in which a deficiency is clinically manifest. It is now known that most deficiency states involve multiple factors, and deficiencies clinically evident are usually associated with additional tissue deficiencies of nutrients not yet clinically manifest. Adequate therapy of a deficiency disease, therefore, requires not only sufficient administration of the specific nutrient long enough to obtain maximum reversal of the manifest lesion but also, in addition, the restoration of tissue normal in all the essential nutrients. This can best be accomplished by a judicious combination of diet, a source of the whole vitamin B complex, the essential [4a] vitamins (vitamin A, D, B_1, B_2, C and niacin amide) and specific therapy. A good diet means a full, nutritious, protein rich diet including natural unrefined foods administered within the tolerance of the patient. The good diet is essential, for it contains, along with known nutrients, unknown factors which cannot yet be encapsulated or dispensed in drops, ampules or tablets. In addition, the prescription of an adequate diet is a means of educating the patient of its value in the hope that he will continue it when other therapy is discontinued.

2. The Food and Drug Administration expressed it as follows (Statement of Policy of the Federal Security Agency Under the Federal Food, Drug and Cosmetic Act, Fed. Register, July 3, 1940): . . . "nor are most consumers sufficiently educated on nutritional questions to enable them to make an intelligent choice of combinations of unenriched foods on the basis of nutritional values."

3. Some authorities apparently feel that a vitamin supplement may conflict with obtaining the best possible dietary. This is not necessarily or even usually true. It should be noted that the increase in vitamin sales between 1939 and 1944 coincided with, and did not prevent, a decided improvement in the per capita American diet. It may be that vitamin supplements call to the attention of their users the importance of a satisfactory diet.

4. The use of vitamins as drugs will not be dealt with in the present article.

4a. By essential vitamins is meant those recognized by the Food and Drug Administration as dietary essentials in human nutrition.

The entire vitamin B complex is given, preferably in the form of brewers' yeast, brewers' yeast extracts or crude extracts of whole liver, liver concentrates or desiccated liver, wheat germ or rice-bran extracts. These are not given primarily because of their content of thiamine, niacin and riboflavin but rather as a source of other B complex nutrients not yet synthesized, thus supplementing these factors as found in the full diet. Many conscientious physicians have been lulled into the belief that a dose of several milligrams of a yeast or liver fraction fortified with synthetic vitamins, in a capsule or a pleasantly flavored syrup or elixir, constitutes adequate B complex therapy. Liver and yeast products should be administered in grams and ounces rather than in grains and milligrams.

A preparation containing large amounts of the fat and water soluble essential [4a] vitamins is also given, as almost every manifest deficiency is associated with a multiple tissue deficiency of these vitamins. A practical formula is one containing vitamin A 25,000 units, vitamin D 1,000 units, thiamine 5 mg., riboflavin 5 mg., niacin amide 150 mg. and ascorbic acid 150 mg. The administration of this formula twice daily for a week or ten days is effectual in helping to restore normal tissue levels of these essential vitamins. After this period, administration once a day is usually sufficient.

To this basic therapy of diet, vitamin B complex and essential vitamins are added the specific chemicals indicated by the manifest nutritional diseases. Thus, if there are lesions of vitamin A deficiency, 50,000 to 150,000 international units of vitamin A is given. Similarly, for their specific lesions, 10 to 20 mg. or even 100 mg. of thiamine, 5 to 15 mg. of riboflavin, 100 to 1,000 mg. of niacin amide and 100 to 1,000 mg of ascorbic acid are prescribed. In acute deficiency disease this treatment may be required only for days or weeks; for chronic deficiency disease treatment may be required for much longer periods.

SOME ABUSES IN THE COMMERCIAL EXPLOITATION OF VITAMINS

The confusion and bewilderment of the public and a possible incipient loss of faith in scientific nutrition are understandable when some of the promotional claims made for certain vitamin and food preparations are examined. The most prevalent abuses fall into three groups, namely therapeutic claims for supplementary levels of vitamins, failure to tell all and advertising puffery beyond a reasonable limit.

To make therapeutic claims for supplementary levels of vitamins—whether contained in enriched or natural or concentrated foods, in tablets, drops or capsules—has been held by the Federal Trade Commission [5] as misleading. This interpretation seems to be well founded. It is granted that doses of vitamins within supplementary levels have been shown by qualified observers [6] to have therapeutic value. It is important, however, to bear in mind the conditions prevailing in all these studies: the favorable responses were obtained in experimental subjects who were previously well fed but had been subjected to an acute dietary deficiency of known factors for a relatively short time. Under these conditions supplementary levels have therapeutic value. In the aggregate there are probably many individuals in this country who from time to time have acute mild dietary deficiencies that will respond, within a reasonable period, to supplementary levels of vitamins. These persons, like people with a coryza, seldom consult a physician, as a few days of rest, with resulting elimination of some possible conditioning factors, a return to adequate diet or the taking of a vitamin supplement, usually results in a cure. It is, as a rule, only when symptoms persist that a physician is consulted. Just how large this group is, no one knows. Among those who consult physicians the commonest vitamin deficiencies are the more chronic ones,[7] both mild and severe, in which supplementary levels of vitamins do not, within a reasonable period of time, cause a reversal of the nutritional lesions.

A review of the literature on vitamin therapy, especially that published since 1938, shows that almost without exception nutrition experts, to correct symptoms and signs due to vitamin deficiencies, advise and prescribe thiamine, niacin, riboflavin, vitamin A and ascorbic acid in daily doses larger than the supplementary levels. Since even physicians who are nutrition experts seldom, if ever, treat a deficiency disease with vitamin doses in supplementary levels, it does not seem to be in the public interest for therapeutic claims; no matter how qualified, to be made in advertising supplementary levels.

The failure to tell all may be a most pernicious practice in the commercial exploitation of nutrition, and one very difficult for any regulatory body or censor to deal with because what is said is carefully made to be factually true. Criticism of this practice meets the reasonable argument of the copy writer that limitations of language make it impossible, in the time or space available, to tell the entire story. This argument seems valid unless the public of average normal intelligence and information would probably be misled by the offending copy. It is recognized that any idea, even if expressed in the simplest and clearest of statements, may be misleading to some portion of the less intelligent, less informed and more gullible public. This fact should not prevent an advertiser from using a true statement which most of the public is capable of understanding without misinterpretation.

Examples of failure to tell all are numerous and include the stressing of economy of vitamin preparations as compared to food costs, incomplete quotations or lifting quotations from their context so as to give wrong implications, incomplete statistics, the enumeration of signs and symptoms of deficiency disease which vitamins will in truth prevent but without information that these signs and symptoms are not specific for nutritional disorders only and may occur as a result of nonnutritional diseases and the implication that this or that preparation will make the user more alluring to the opposite sex, except as far as the preparation will help maintain normal health. One of the most common failures to tell all is the implication that synthetic vitamins may be harmful or in supplemental levels have effects like drugs, that natural vitamins alone are effectual or that they have a value superior to

5. Federal Trade Commission: Docket No. 2979, Washington, D. C., July 20, 1945.

6. Wilder, R. M.: Thiamine Deficiency, M. Clin. North America **27**: 409 (March) 1943. Johnson, R. E.; Darling, R. C.; Forbes, W. H.; Brouha, L.; Egana, E., and Graybiel, A.: Effect of Diet Deficient in Part of Vitamin B Complex on Men Doing Manual Labor, J. Nutrition **24**: 585 (Dec.) 1942. Jolliffe, N.; Goodhart, R.; Gennis, J., and Cline, J. K.: Experimental Production of Vitamin B_1 Deficiency in Normal Subjects: Dependence of Urinary Excretion of Thiamine on Dietary Intake of Vitamin B_1, Am. J. M. Sc. **198**: 198 (Aug.) 1939. Foltz, E. E.; Barborka, C. J., and Ivy, A. C.: The Level of Vitamin B Complex in the Diet at Which Detectable Symptoms of Deficiency Occur in Man, Gastroenterology **2**: 323 (May) 1944.

7. Kruse, H. D.; Bessey, O. H.; Jolliffe, N.; McLester, J. S.; Tisdall, F. F., and Wilder, R. M.: Inadequate Diets and Nutritional Deficiencies in the United States: Their Prevalence and Significance, Bull. 109, National Research Council, November 1943.

synthetic vitamins. This common implication, based on the fact that natural foods or concentrates contain values and substances other than their known vitamins, has been so misused that the Food and Nutrition Board of the National Research Council has recently gone on record to the effect that "there can be no possible difference between thiamine prepared synthetically and that which is extracted from a natural source of thiamine such as wheat or meat (or yeast). The same is true of riboflavin and of other vitamins that thus far have been synthesized. A vitamin is a chemical compound whether it is made by nature or by man." [8]

Advertising puffery beyond reasonable limits is another method of exploitation that is difficult to regulate; courts have held that advertising puffery, within reasonable limits, is not improper. "Within reasonable limits" may mean one thing to a regulatory body and something else to a copy man attempting to sell, in a highly competitive market, a product that is no better or no worse than a dozen other similar products. Reasonable limits include some puffing of the product based on a unique manufacturing device or on a peculiar and unique balance or unusual mixture, if in truth there are advantages. Unreasonable limits would seem to be when claims are made for some vitamin or mineral whose value in human nutrition has not yet been established, to claim or imply that this or that preparation will enable a person to neglect his diet and that he will be as well as or better off than with consumption of a satisfactory diet or to claim or imply that this or that preparation will enable a normal person who always consumed a satisfactory diet to feel better. All of these inferences have been decisively exploded.

Another group of facts susceptible to much puffery by advertisers and to arbitrary decisions on the part of regulatory bodies are reports on the prevalence of inadequate diets among the general population, and claims or inferences concerning either the ease or the impossibility of the average consumer's obtaining an adequate diet from food alone.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION noted in an editorial "that there is a real difference as measured in terms of growth, development and general health record between optimum and just adequate nutrition; and that every practical effort should be made to apply this knowledge in the interests of human welfare." Much controversy exists concerning the minimum amounts of the various specific nutrients that are needed to avoid dietary inadequacies and resulting deficiency diseases. In contrast, there is fair unanimity that the National Research Council's Recommended Daily Allowances represent approximately the amounts of essential nutrients needed to insure, for population groups, a fair margin of safety in everything that food can contribute toward the long-range advancement of human welfare.

Wilder [9] has pointed out that the daily allowances have at times been misused when it was suggested that the failure of a diet to meet these recommended quantities of nutrients is *ipso facto* evidence of dietary inadequacy or, still worse, of nutritional abnormality. This inference was unwarranted, "as the recommended allowances include a factor of safety of at least 30 per cent to provide for persons whose requirements may be greater than average. . . ." The failure of a population group to meet these requirements, therefore, does not mean that the group as a whole has an inadequate or deficient diet. It does mean, however, that the diet is unsatisfactory in that it fails to provide adequate nutrients for some persons whose requirements are in excess of the dietary intake. Since the individual usually has no way of knowing whether his needs are below average or above, and since those responsible for feeding population groups have no practical way of segregating those with nonaverage requirements, the only diet "that can be countenanced is one that provides enough for all well persons whether their requirements as related to the average are high or low."

Using the National Research Council's recommended daily allowances as criteria for a satisfactory diet, the Bureau of Agricultural Economics of the United States Department of Agriculture [10] has shown that the food that disappeared into civilian retail consumption in 1944 contained after conservative deductions for waste and deterioration of ingredients in storage, transportation, cooking, leaching and serving satisfactory levels of nutrients. In 1943 the figures for riboflavin and niacin were not satisfactory. In the period 1935-1939 the available dietary levels of thiamine, riboflavin, niacin and calcium were unsatisfactory (table 4). These calculations are based on per capita consumption. It is not to be supposed that perfect distribution has ever been obtained, so that the number of people who received both above and below the per capita portions must be numerically large. Bearing out these figures of food

TABLE 4.—*Estimated Nutritive Value of Civilian Food Supply for 1935-1939, 1943 and 1944, Showing Effect of Certain Allowances* *

(Prewar Levels and Recommended Dietary Allowances are Shown for Comparison)
(Expressed as Daily Quantities of Nutrient per Capita)

	Energy Value, Calories	Protein, Gm.	Fat, Gm.	Carbohydrate, Gm.	Calcium, Mg.	Phosphorus, Mg.	Iron,† Mg.	Vitamin A, I. U.	Thiamine,† Mg.	Riboflavin,† Mg.	Niacin,† Mg.	Vitamin C, Mg.
After allowances for edible waste and cooking losses												
1935-1939 supply	3,040	84	122	402	849	1,370	12	7,600	1.1	1.7	11	75
1943 supply	3,170	93	132	403	970	1,550	14	8,700	1.6	2.0	14	84
1944 supply	3,190	94	132	408	980	1,560	15	8,300	1.7	2.3	15	88
N. R .C. recommended dietary allowances ‡	2,730	65	...	...	900	.....	..	4,600	1.5	2.2	15	70

* Excerpt from table 2 of a personal communication from Charlotte Chatfield, chief, Food Needs Section, Civilian Food Requirements Branch, Office of Marketing Services, War Food Administration, April 3, 1945.

† Assumes 65 per cent enrichment of white bread and flour.

‡ Weighted for composition of the civilian population. Expressed in terms of food as eaten.

8. Wilder, R. M., and Williams, R. R.: Enrichment of Flour and Bread: A History of the Movement, Bull. 110, National Research Council, November 1944.

9. Wilder, R. M.: Misinterpretation and Misuse of the Recommended Dietary Allowances, Science **101**: 285 (March 23) 1945.

10. Chatfield, C.: Personal Communication as chief of Food Needs Section, Civilian Food Requirements Branch, Office of Marketing Services, War Food Administration, April 3, 1945.

availability are the dietary survey records compiled by a committee of the National Research Council in 1943,[7] which disclosed that unsatisfactory diets were widespread in all sections of this country. Later surveys made since this review of the National Research Council's committee have reflected the overall improvement in the nutrients available per capita in 1943. For example, the Bureau of Human Nutrition and Home Economics reported in 1944 that "in 1936 about three fourths of the families in the United States had diets that did not meet the National Research Council's recommendations for riboflavin; and about half had diets that were low in calcium, thiamine and ascorbic acid. It is estimated that in the spring of 1942 the diets of more than half of the families still did not meet the recommended allowances for riboflavin and that the proportion of diets low in calcium had been reduced to less than a third; the proportion low in thiamine to a fourth, and the proportion low in ascorbic acid, in which there was the greatest improvement, to less than a tenth. Some of the improved situation in respect to ascorbic acid was a result of seasonal increases in the consumption of citrus fruit and leafy greens. There was also a great reduction in the estimated proportion of families that had diets failing to meet current recommendations in vitamin A value, iron and protein, from about a fourth in the earlier period to around a tenth in the later period." [11] It is well to bear in mind, as pointed out by these investigators, that the estimates for both periods "are optimistic, since no correction has been made for nutrient losses in food preparation." [11]

The American Institute of Public Opinion [12] in February 1943 made a single day nationwide survey of consumption of the seven groups of foods considered essential in a satisfactory diet as recommended by the Bureau of Human Nutrition and Home Economics. The results presented in table 5 show that a significant fraction of the American population in all economic groups fails to include all the basic foods in the daily diet. As has been pointed out, this means that the diet is probably unsatisfactory.

In a survey conducted during August, September, November and December 1943 by Lockhart and his associates [13] actual chemical analysis was made of duplicate meals eaten by 71 individuals selected to obtain a distribution of age (above 5 years), sex, activity and economic status similar to that of the nation as a whole. By these analyses the average daily intake was found to be satisfactory in ascorbic acid, calcium and iron and unsatisfactory in thiamine, riboflavin and niacin. Only 7 per cent of the subjects, however, received a satisfactory level of all the nutrients analyzed, and all of these were children. Assuming that the National Research Council's recommended allowances included a margin of safety of approximately one third above the "protective" levels, these investigators found that 21 per cent of the subjects failed to obtain a "protective" amount of all nutrients.

Concurrently with this chemical dietary analysis a one day survey was made of the diets of 3,336 persons in all parts of the United States. The quality of the food selection in this large group was definitely inferior to that of the 71 individuals whose diets were examined by chemical analysis. "Thus it is possible that the dietary intake of the nation at the time this study was made was even less adequate than that of the small group whose diets were analyzed." [13] It seems therefore that, compared to the satisfactory diet, there is a high prevalence of unsatisfactory diets in all sections of this country. To take any other stand is to ignore the facts.

While it is possible, if one has the necessary information, education and income to purchase an adequate diet, it is obviously also not easy for the average person who does not know the difference between a calory and a vitamin to make this selection. This fact is borne out by the experience of investigators who have actually computed the values in dietaries consumed by those who are reasonably intelligent and have the necessary means to purchase whatever food they please.

These are the conditions on which the commercial exploitation of vitamin preparations is based and which make possible the abuses that have been described. They are also the conditions which create an opportunity for the physician to serve his patients and the public welfare by employing the advances in our knowledge of nutrition in such a way as to promote health.

TABLE 5.—*Percentage of American Adults Who Omitted One of the Seven Groups of Essential Foods* *

Food Group	Upper Income	Middle Income	Lower Income	Average
Fruits and raw greens †	24	35	56	45
Eggs: 1 a day	45	43	52	48
Milk or cheese or both	27	26	40	34
Vegetables: 1 leafy green or yellow	19	21	29	25
Meats: meat, fish or poultry	7	8	15	12
Other vegetables or fruit	6	6	10	8
Cereals or bread: whole grain or enriched	3	2	3	3

* Compiled from Report of American Institute of Public Opinion.[12]
† Tomatoes, citrus fruits or juices, raw cabbage or salad greens.

CONCLUDING STATEMENT

The physician can contribute decisively to the preservation and the improvement of his patients' health by judicious nutritional advice as to satisfactory dietaries and the appropriate prescription, when indicated, of supplementary and therapeutic levels of vitamins.

Though a satisfactory diet is the best way to insure optimum nutrition, practicality dictates the use of supplementary levels of vitamins whenever a patient is not regularly consuming a satisfactory diet. When, however, signs of a dietary deficiency disease are manifest, supplementary levels of vitamins are inadequate and nutritional therapy is indicated.

The commercial exploitation of vitamins is subject to certain abuses, particularly the making of exaggerated claims, the publicizing of statements which, by failing to tell all, allow unfounded inferences to be made, and unreasonable puffery. These abuses may lead to a loss of public confidence and rejection of the good in scientific nutrition as well as the bad in its exploitation. For self interest over the long pull firms advertising directly to the public should censor their copy so that false claims or false inferences are eliminated.

39 East Seventy-Fifth Street, New York 21.

11. Phipard, E. F., and Adelson, S. F.: Family Food Consumption in the United States, Spring 1942, Misc. Pub. 550, U. S. Dept. Agric., 1944.
12. Gallup Poll Tests Wartime Eating Habits (News From the Field), Am. J. Pub. Health **33**: 470 (April) 1943.
13. Lockhart, E. E.; Harris, R. S.; Tapia, E. W.; Lockhart, H. S.; Nutter, M. K.; Tiffany, V., and Nagel, A. H.: Study of the Nutritional Quality of Dietaries by Chemical Analysis, J. A. Diet. Assn. **20**: 742 (Dec.) 1944.

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SATURDAY, OCTOBER 27, 1945

NUTRITION IN THE NETHERLANDS

During the later part of the recent war in Europe the Netherlands was known to be one of the German occupied countries suffering severely from malnutrition. Reports reaching the liberated area from still occupied western Holland toward the end of last October attested to the extreme degree of food shortage and starvation existing there. Careful plans were made for a rapid survey of the nutritional status of these people by three teams of Allied nutrition experts promptly following their liberation. Stocks of special foods for treatment of the most desperate situations were imported, and fifty-one Dutch medical feeding units were organized and trained in their use.

The preliminary report on this problem of mass starvation[1] indicates the extensive ramifications of prolonged consumption of food at caloric levels of approximately 1,000 calories per day. The people complained of bodily and spiritual exhaustion. Dizziness and a tendency to collapse on prolonged standing were commonplace. Complaints of backache, leg-ache, chilliness and numbness of the extremities were frequent. Wasting and emaciation were striking in the appearance of the people. The skin was pale, sometimes with dun pigmentation of the face, and petechiae or larger superficial hemorrhages were noted on the backs of the hands. Hunger edema was not universally found but was present in about 20 per cent of those examined in a "street clinic" in Rotterdam.[2] This appeared most often in the lower part of the body and varied in all degrees of severity. The skin of other parts of the body at the same time often showed signs of desiccation. Objective findings sufficient to justify a diagnosis of frank scurvy, beriberi, pellagra or vitamin A deficiency were not encountered, although the incidence of purpuric manifestations, sensory changes, cheilosis and follicular hyperkeratosis was considerable. The heart was usually normal, although pulse rates often down to 40 per minute, systolic blood pressures to 80 mm. of mercury and body temperatures of 95 F. pointed to a low vitality. All of the persons seen were anemic, with hemoglobin values of about 11 Gm. per hundred cubic centimeters and a color index of 1 or slightly greater. A general osteoporosis had developed in some patients suffering from starvation. Those most severely affected had pain in the bones, and some had developed a progressive kyphoscoliosis of the upper part of the spine. In other less emaciated cases joint pains were often reported. Approximately 5 per cent of the total population of the areas examined were found to be in a serious state of undernutrition. These persons for the most part dwelt in the larger cities.

Treatment of the more severe cases consisted in absolute bed rest and conservation of body heat. Comparative observations were made on the effectiveness in initiating recovery of enzymic protein hydrolysates with and without added glucose and vitamins and a diet of high protein-moderate calory content. The hydrolysates were frequently distasteful and an aversion to them, sometimes vomiting, developed although they caused no other untoward intestinal symptoms. Psychologically the patients thought they were getting insufficient food. Hydrolysates in low concentration had little beneficial effect on the edema or apathy. Two liters of 7.5 to 10 per cent hydrolysate with an equal quantity of glucose daily had a moderately good effect. Others given 80 Gm. of protein with a 2,000 calory diet lost their edema but did not gain weight. Subsequently additional calories added in the form of 100 Gm. of butter produced a gain in weight and general improvement. The best results were obtained from a diet containing 300 Gm. of natural protein and 3,200 calories. For those who were too weak or refused to take food because of mental disturbance due to starvation the hydrolysate-glucose mixture administered by gavage was valuable for a short time until ordinary feeding could be instituted. In the hands of these nutritionists 5 per cent acid casein hydrolysate given intravenously caused thrombosis and when used alone did not secure favorable results.

Many of the complications were closely related to the extreme malnutrition and responded to generally improved nutrition rather than to specifics. Thus the severe anemias were not influenced by administration of vitamins, liver extract, injections or iron preparations with or without hydrochloric acid but slowly improved after sufficient feeding. The hemorrhagic diathesis did not respond to ascorbic acid but disappeared slowly with the general improvement. In other instances the use of such specific agents as nicotinamide for sore, red tongue and vitamin D for the bone dystrophies brought improvement rapidly.

In spite of the utilization of all therapeutic weapons in the modern scientific armamentarium for the correction of the nutritional deficits, approximately 10 per

1. Burger, G. C. E.; Sandstead, H. R.; Drummond, Sir Jack: Starvation in Western Holland: 1945, Lancet **2**: 282 (Sept. 1) 1945.
2. Stare, F. J.: Nutritional Conditions in Holland, Nutrition Reviews **3**: 225 (Aug.) 1945.

cent of the persons requiring hospital admission died. Many in a state of shock or severe atrophy proved refractory to the use of hydrolysates or other emergency treatments. The positive as well as the negative results secured from observations made under the unusual conditions of this study contribute importantly to our knowledge of human nutrition.

VACCINATION AGAINST INFLUENZA

In April 1944 the preliminary report by the members of the Commission on Influenza on the prophylactic value of vaccination against influenza appeared in THE JOURNAL.[1] The virus for the preparation of the vaccine was obtained from allantoic fluid of embryonated hen's eggs inoculated forty-eight hours earlier. The virus was concentrated ten times in isotonic solution of sodium chloride following adsorption to and elution from the embryonic erythrocytes. The infectious capacity was inactivated by solution of formaldehyde in a concentration of 1:5,000. Phenyl mercuric nitrate 1:100,000 or borate 1:50,000 was then added for bacteriostatic purposes. Each cubic centimeter of the vaccine was made up of 0.5 cc. representing type A virus recovered from 5 cc. of allantoic fluid and 0.5 cc. representing the type B virus recovered from 5 cc. of allantoic fluid. The type A component represented equal parts of the PR8 strain and of the Weiss strain, isolated in May 1943. The type B component contained only the Lee strain. The study was carried out in Army Specialized Training Program units of eight universities in different parts of the United States and in a ninth group comprising the members of Army Specialized Training Program units of five New York medical and dental colleges. Approximately 12,500 men were involved. Each company or organization within a unit was divided in half, so that alternate individuals received, respectively, vaccine and control material. The commission stated in its preliminary report that vaccination done shortly before or even after the onset of the epidemic was found to exert a protective effect with a total attack rate of 2.22 per cent among the 6,263 vaccinated and 7.11 per cent among the 6,211 controls, a ratio of 1 to 3.2. The influence of vaccine was most clearly evident at the height of the epidemic prevalences.

In a subsequent communication Thomas Francis Jr.,[2] director of the commission, gives a more detailed analysis of the evidence obtained. Correlation of the individual reports from the various units demonstrates for the first time, according to Francis, that subcutaneous vaccine of the human population with inactivated influenza virus vaccine exerts a pronounced effect on susceptibility to influenza A during an epidemic of high incidence. Rickard and his associates[3] at the University of Minnesota found the clinical attack rate during an epidemic of influenza which began eleven days after vaccination to be 2.7 per cent, as compared to 9.06 per cent in the control group. The epidemic was proved to be due to influenza A by virus isolation, by positive serologic response or by both in a high percentage of clinical cases. The antibody response to influenza A virus produced by the vaccine was pronounced and similar to that caused by natural infection. Hale and McKee[4] report from the University of Iowa that one subcutaneous inoculation with the influenza vaccine used in this area at the beginning of the epidemic effectively decreased the incidence of the disease in the vaccinated group.

In contrast to these are the observations of Eaton and Meiklejohn[5] on their experiences with vaccine in California. They found that the gross incidence of febrile respiratory disease during the outbreak of influenza A was not appreciably different in a group of 796 vaccinated students from that in a group of 773 controls. In serologic tests by the Hirst chicken erythrocyte agglutination method, 19 of 63 patients with influenza A showed an insignificant rise in titer (twofold or less) with the strain PR8, while only 1 failed to show a fourfold increase in the same test with one of the current infecting strains. The effects of antigenic variations in the infecting strains of virus, of differences between the two vaccine preparations used, of the interval vaccination and infection and of other factors are considered as possible causes for the inferior results of vaccination in California as compared with those of other investigators using the same vaccines. Hirst and his associates[6] report their experiences with vaccine at Princeton and Rutgers universities and the College of the City of New York. An epidemic of influenza A was investigated in the three populations. The epidemic was of mild character and affected about 8 per cent of untreated persons. The attack rate of the disease was 77 per cent lower among vaccinated than among control individuals, and demonstrable immunity first appeared on the eighth day after vaccination. Salk and his associates[7] at the University of Michigan found an incidence of 8.58 per cent of cases hospitalized for influenza among 875 control cases and an incidence of 2.27 per cent among 878 vaccinated persons; thus 3.7 times as many cases developed in controls as among vaccinated individuals. Antibody

1. Members of the Commission on Influenza, Board for the Investigation and Control of Influenza and Other Epidemic Diseases in the Army, Preventive Medicine Service, Office of the Surgeon General, United States Army: A Clinical Evaluation of Vaccination Against Influenza, J. A. M. A. **124**: 982 (April 1) 1944.

2. Francis, Thomas, Jr.: The Development of the 1943 Vaccination Study of the Commission on Influenza, Am. J. Hyg. **42**: 1 (July) 1945.

3. Rickard, E. R.; Thigpen, Minnie, and Crowley, James H.: Vaccination Against Influenza at the University of Minnesota, Am. J. Hyg. **42**: 12 (July) 1945.

4. Hale, William M., and McKee, Albert P.: The Value of Influenza Vaccination When Done at the Beginning of an Epidemic, Am. J. Hyg. **42**: 21 (July) 1945.

5. Eaton, Monroe D., and Meiklejohn, Gordon: Vaccination Against Influenza: A Study in California During the Epidemic of 1943-1944, Am. J. Hyg. **42**: 28 (July) 1945.

6. Hirst, George K.; Plummer, Norman, and Friedewald, W. F.: Human Immunity Following Vaccination with Formalinized Influenza Virus, Am. J. Hyg. **42**: 45 (July) 1945.

7. Salk, Jonas E.; Menke, Wilbur J., Jr., and Francis, Thomas, Jr.: A Clinical, Epidemiological and Immunological Evaluation of Vaccination Against Epidemic Influenza, Am. J. Hyg. **42**: 57 (July) 1945.

studies on serums obtained from a sampling of the control group before and after the epidemic revealed serologic evidence of influenza A infection in 41 per cent. These authors believe that dilution of the controls with an equal number of vaccinated persons in the study population may have reduced the incidence of disease among the controls and that a comparison of attack rates in completely vaccinated groups, if all other conditions were equal, would demonstrate a greater effect of vaccination than was apparent in this study. The observation that the differences in incidence between control and vaccinated subjects were greatest at the height of the epidemic and diminished as the epidemic progressed is interpreted to mean that the difference in concentration of susceptible persons was most pronounced at the onset and peak of the influenza prevalence. As the epidemic advanced by the natural immunizing procedure the concentration of susceptible persons in both control and vaccinated groups tended to approach the same level.

A striking relationship was observed between the level of serum antibody and frequency and severity of illness, in both control and vaccinated groups, when titers for the Weiss strain of type A virus were analyzed, while the trend was only suggestive in terms of the titers for the PR8 strain. The Weiss strain, isolated six months prior to the onset of the epidemic, appears to have been closely related antigenically to the strain prevalent during the outbreak in this area. The data indicate the existence of an antibody zone above which titers may have to be raised to produce the desired effect.

Current Comment

STREPTOMYCIN AND PROMIN IN EXPERIMENTAL TUBERCULOSIS

Guinea pigs infected with tuberculosis were employed by Smith and McClosky [1] to determine whether streptomycin has any beneficial effect, to compare the results of streptomycin therapy with the sulfone promin and to explore the possibilities of combined treatment with these two chemotherapeutic agents. Under the experimental conditions of treatment streptomycin injected intramuscularly produced a definitely greater chemotherapeutic effect than promin. The dose of promin used was about one-half the maximum tolerated dose, while the dose of streptomycin used was less than one twentieth of its maximum tolerated dose; hence streptomycin had a therapeutic index at least ten times that of promin. Neither of these agents used alone completely eradicated the tuberculous process. Larger doses and better methods of administration may well increase the therapeutic effect of streptomycin. By the application of a suitable combination of promin and streptomycin, Smith and McClosky obtained results better than any they had ever achieved before in the treatment of experimental tuberculosis infections. They believe their experimental results warrant the cautious application of combined treatment to selected patients.

1. Smith, M. I., and McClosky, W. T.: The Chemotherapeutic Action of Streptomycin and Promin in Experimental Tuberculosis, Pub. Health Rep. **60**: 1129 (Sept. 28) 1945.

PUBLICITY FOR SCIENTIFIC MEDICINE

Publicity for new discoveries in the field of medicine is a two edged sword. It may extend the hopes of the public far beyond what is warranted. It may cause pressure on physicians to try methods of treatment that may not be desirable. On the other hand, the public is certainly entitled to know about new discoveries in medicine and their significance in relation to the maintenance of health and the prevention of disease. Recently the periodical *Nordisk Medicin* has developed a special technic in relation to the scientific medical articles that it publishes with a view to solving this problem. When an article is undesirable or unready for public exploitation, the editors place at the top of the article as published in the medical journal the phrase "Omtale i dagspressen forbydes." This means that reproduction in the daily press is forbidden. Since the material in the publication is covered by controls, as our periodicals are covered by copyright law, this would seem to serve the purpose of delaying publicity for scientific contributions until the medical profession itself considers such publicity warranted.

METABOLIC FUNCTION OF PYRIDOXAL

Pyridoxal,[1] the 4-aldehyde of pyridoxine (vitamin B_6), apparently plays an important part in certain biochemical reactions. Gale and Epp [2] demonstrate in the case of bacterial decarboxylases that the enzymes decarboxylating the amino acids l-lysin, l-tyrosine and l-arginine are composed of two portions, a cocarboxylase and a protein apocarboxylase. Both portions must be present to promote enzyme action. All of the enzymes appear to have a common cocarboxylase which has been obtained from yeast. Pyridoxal when added to the dried bacterial cells alone is inactive, but, if adenosine triphosphate is added, decarboxylation of amino acids occurs; the function of the adenosine triphosphate is to phosphorylate the pyridoxal, forming pyridoxal phosphate. Recently Baddiley and Gale [3] phosphorylated pyridoxal chemically; when it was added to the apocarboxylase, full enzymatic activity for the decarboxylation of either tyrosine, arginine, lysine or ornithine was regenerated. Until pure compounds are isolated it cannot be proved that the coenzyme produced from pyridoxal through activation with yeast juice is identical with that obtained by strictly chemical activation. Nevertheless the foregoing observations offer considerable evidence regarding the function of pyridoxal in bacteria. The research here reported is a fine example of the manner in which fundamental knowledge of the nature of bacteria is being acquired that may lead eventually to new technics for control.

1. Snell, Esmond E.: J. Biol. Chem. **154**: 313 (June) 1944.
2. Gale, E. F., and Epp, Helen M. R.: Biochem. J. **38**: 232 (No. 3) 1944.
3. Baddiley, J., and Gale, E. F.: Nature **155**: 727 (June 19) 1945.

MEDICINE AND THE WAR

ARMY

ATYPICAL LICHEN PLANUS AMONG PACIFIC TROOPS

The Office of the Surgeon General recently revealed that army doctors in the Southwest Pacific have found fewer than 3 cases per thousand men of a new noncontagious skin disease, which has been named atypical lichen planus and is known to the soldier as one of the varieties of "jungle rot."

Atypical lichen planus apparently becomes active partly because of an occasional unusual sensitivity of a few individuals to atabrine, the drug which was used so successfully in combating malaria among troops in the tropics, army medical reports indicate. However, army doctors emphasize that the vast majority of persons who take atabrine regularly are not affected.

First reports describing this disease were submitted by two army dermatologists in the Southwest Pacific: Lieut. Col. Charles Schmitt of Pittsburgh and Major Thomas Nisbet of Pasadena, Calif. Their studies convinced them that atabrine was the underlying cause. Although medical officers agree with this opinion, they also recognize that many factors are probably contributory. These include skin injuries and irritations of many kinds, excessive exposure to sunlight, profuse perspiration, dietary deficiencies, and emotional and nervous factors. Older men have been found to be more susceptible than younger men, and the disease has also occurred among nurses and Wacs.

Studies revealed that the few men and women who did contract the disease did so after atabrine had been taken only for several months, not regularly over a prolonged period.

Medical officers soon learned to recognize atypical lichen planus in its early stages and were able to prevent its spread to other parts of the body. In all but a small percentage of cases the disease has cleared up under treatment.

PRODUCE FOURTEEN OUNCES OF STREPTOMYCIN A MONTH

The War Department recently stated that streptomycin, a new wonder sister drug to penicillin, was being used in thirty army general hospitals over the country but that it was so difficult to obtain that the total output of the four companies now making it has been only 14 ounces a month.

Major Gen. Norman T. Kirk, Surgeon General of the Army, said that the Army was receiving many requests for the drug for use in treatment of urinary and other infections caused by gram negative bacteria which do not respond to penicillin but that these cannot be met since the Army neither controls the supply nor can get enough for its own needs in treatment of soldiers wounded in battle. "The Army and Navy are purchasing only a part of available production," General Kirk said. "In August, 28 ounces or 800,000,000 units was purchased. Joint Army-Navy expectations for September are 162 ounces, but it is anticipated that production will be not more than 70 ounces. It is hoped that Army-Navy procurement can be doubled in October for military needs alone now are about 2,000 ounces a month."

General Kirk stated that Merck, Upjohn, Abbott and Squibb were the principal manufacturers of the new product but that other concerns were working at experimental production at pilot plants and that any civilian request for streptomycin naturally would go to these companies.

MERITORIOUS SERVICE PLAQUE

The 45th General Hospital was recently awarded the Meritorious Service Unit Plaque for superior performance of duty in the accomplishment of exceptionally difficult tasks in the Peninsular Base Section for the period June 1, 1944 to Dec. 1, 1944.

AVIATION MEDICAL EXAMINERS GRADUATE

One hundred and forty-five medical officers recently completed the Aviation Medical Examiners' course at the Army Air Forces School of Aviation Medicine, Randolph Field, Texas. Lieut. Col. Fratis L. Duff, assistant commandant of the school, presented awards to 145 flight surgeons and 20 flight nurses.

CLINICAL PSYCHOLOGIC SERVICES

Because of the close relationship between psychiatry and clinical psychology, the Office of the Chief, Clinical Psychology, Classification and Replacement Branch, Adjutant General's Office, has been recently transferred to the Office of the Surgeon General. Col. Morton A. Seidenfeld has been assigned as chief, Clinical Psychology Branch, Division of Neuropsychiatric Consultants, and Capt. L. I. O'Kelly has been designated assistant chief of the Clinical Psychology Branch.

Provision has also been made for the detail of all clinical psychologists now serving as officers into the Medical Administrative Corps. This step will permit an increase in the effectiveness of their utilization in medical installations where they will be under the direct control of the Medical Department.

ARMY HOSPITAL UNIT COMMENDED

The 20th General Hospital was recently commended the citation being addressed to Lieut. Gen. Dan. I. Sultan, U. S. Forces, India-Burma theater: "Under extremely difficult climatic conditions and in an area devoid of practically everything usually considered necessary for the construction and operation of a general hospital, you have built an institution that has been complimented by every one who has visited it. The record of the 20th General Hospital would be outstanding in any theater of operations. Much of this achievement can be attributed to your fine qualities of leadership, but your officers, including your nurses, and all of your men have shown a devotion to duty which is worthy of the highest praise."

165TH STATION HOSPITAL COMMENDED

The 165th Station Hospital, under the command of Col. G. I. Sneidman, was recently commended "for its superior performance and outstanding devotion to duty during operations against the enemy from Dec. 26, 1944 to June 30, 1945. The untiring effort and high degree of professional skill evidenced by all officers and enlisted men have contributed materially to the alleviation of suffering of the wounded and the survival of many who were critically wounded. The inspiring manner in which the 165th Station Hospital has carried out its mission reflects great credit on the Medical Department and the military service as a whole."

OLD FARMS CONVALESCENT HOSPITAL CITED

The Old Farms Convalescent Hospital (Special) at Avon, Conn., was recently awarded the Meritorious Service Unit Plaque for its work with the blinded soldiers. In making the award Major Gen. Norman T. Kirk, Surgeon General of the Army, said "The Old Farms Convalescent Hospital (Special), first established in June 1944, quickly developed into an institution unique in its kind in the country, even in the world. Ably administered, the institution has taken over the important problem of social adjustment of the blinded soldier and in these relatively few months has succeeded in its purpose admirably."

ARMY AWARDS AND COMMENDATIONS

Major Clement E. Steyer

Major Clement E. Steyer, formerly of Cleveland, was recently awarded the Bronze Star for achievement in support of combat operations while on duty on the Army Hospital Ship *Emily H. M. Weder* from August 1944 to March 1945. The citation accompanying the award explained that "during the invasion of southern France, in the Italian combat zone and later in the landings on Leyte and Luzon in the Philippines this hospital ship participated in the evacuation of wounded from the established beachheads. Under difficult working conditions and in perilous water he personally supervised the screening of arriving casualties aboard ship and organized shock teams for immediate medical therapy. Complementing his medical administrations with a refreshing sense of humor and a calm manner, he consistently placed evacuated patients in a far healthier frame of mind and gave them confidence. His achievements contributed greatly to the recovery, both physical and mental, of many casualties and reflected great credit on the medical service." Dr. Steyer graduated from St. Louis University School of Medicine in 1924 and entered the service Oct. 19, 1942.

Captain Gustavo A. Motta

The Bronze Star Medal was recently awarded to Capt. Gustavo A. Motta, formerly of Providence, R. I., for "meritorious service in connection with military operations against an enemy of the United States in eastern France and Germany from March 1, 1945 to April 24, 1945. During the division's offensive operations against the enemy in eastern France and Germany between March 1 and April 24, 1945, Captain Motta, as battalion surgeon, performed his duties in an outstanding manner. Despite the necessity of working long hours and under adverse conditions, oftentimes under enemy fire, he displayed superior knowledge and unusual professional ability in the care and treatment of our sick and wounded. His medical skill and untiring efforts contributed substantially to the maintenance of a high standard of medical treatment within the battalion. His outstanding professional ability and selfless devotion to duty and the wounded reflect the highest credit on Captain Motta and on the armed forces of the United States." Dr. Motta graduated from Georgetown University School of Medicine, Washington, D. C., in 1940 and entered the service Feb. 25, 1944.

Captain Spencer Myers

Capt. Spencer Myers, formerly of Ossining, N. Y., was recently awarded the Bronze Star in recognition of his meritorious performance of duty in connection with military operations against the enemy near Luzon in the Philippines. The citation read, in part, "He not only worked as a battalion surgeon in an efficient and untiring manner but was also outstanding in rendering medical attention to two enlisted men who had been wounded by fragments of a knee mortar." Dr. Myers graduated from New York University College of Medicine, New York, in 1932 and entered the service Aug. 15, 1942.

Major Thomas N. Horan

The Bronze Star was recently awarded to Major Thomas N. Horan, formerly of Detroit, "for meritorious achievement in support of military operations." He is chief of officers' section in the 17th General Hospital (U. S.), a unit which was presented with the Meritorious Service Unit Plaque for superior performance of duty in connection with furnishing medical service to the Fifth Army and other U. S. Troops in the Mediterranean Theater of Operations. Dr. Horan graduated from the University of Michigan Medical School, Ann Arbor, in 1926 and entered the service July 15, 1942.

Lieutenant Colonel Alfred Campbell Ledoux

Lieut. Col. Alfred Campbell Ledoux, formerly of Evanston, Ill., was recently awarded the Bronze Star. The citation read, in part, "Lieut. Col. Alfred Campbell Ledoux, while serving in the Army of the United States, distinguished himself by meritorious service in connection with military operations not involving aerial fight against an enemy of the United States. As chief of the x-ray service, 108th General Hospital, Lieutenant Colonel Ledoux was instrumental in the discovery, the reconstitution of and the early adaption of captured German x-ray and radiotherapy equipment. This was accomplished by virtue of his initiative, specialized technical knowledge and highly professional attainments. The immediate availability of this splendid equipment at a time when transport of our own equipment was extremely difficult and uncertain, owing to the exigencies of the military situation, materially assisted in the diagnostic care and treatment of many thousands of casualties." Dr. Ledoux graduated from Tufts College Medical School, Boston, in 1929 and entered the service Jan. 1, 1943.

Major Robert K. Whitely

The Bronze Star was recently awarded to Major Robert K. Whitely, formerly of Detroit, who, while a prisoner of war in Japanese Prison Camp No. 1, Cabanatuan, Philippine Islands, from October 1944 to January 1945, performed conspicuous service as ward surgeon in a general hospital. The citation called attention to the fact that "with improvised, makeshift equipment and depleted medical supplies, he labored against great odds and on a starvation diet. In addition to his medical tasks he assumed the very difficult assignment of provost marshal of the prison camp. He was responsible for interpreting Japanese regulations and orders and having them carried out in every detail. He also maintained order in camp and administered appropriate disciplinary measures when necessary. His outstanding performance under extremely difficult and hazardous conditions contributed in great measure to the well-being of his fellow prisoners of war." Dr. Whitely graduated from the University of Michigan Medical School in 1933 and entered the service Nov. 5, 1940.

Colonel Ernest H. Parsons

Col. Ernest H. Parsons, commanding officer of the 108th General Hospital, Paris, France, was recently awarded the Legion of Merit for conspicuous service during the Battle of the Bulge last December. At the time of the von Runstedt breakthrough near Liége, Belgium, Colonel Parsons was commanding officer of the 130th General Hospital. On Christmas eve the Americans were compelled to withdraw and leave the seriously wounded in the hospital. Although he could have appointed any of his officers to remain, Colonel Parsons, with two junior medical officers and twenty-five enlisted men, stayed in the hospital to care for the wounded. The Germans occupied the position and advanced beyond it. For three days, over the Christmas holiday, Colonel Parsons and his cadre worked behind the German lines. Dr. Parsons graduated from Vanderbilt University School of Medicine, Memphis, in 1930 and entered the service June 11, 1930.

Colonel Henry R. Carstens

The Legion of Merit was recently awarded to Col. Henry R. Carstens, formerly of Detroit, "for exceptionally meritorious conduct in the performance of outstanding services." Dr. Carstens is the commanding officer of the 17th General Hospital (U. S.), a unit which received the Meritorious Service Unit Plaque for superior performance of duty while furnishing medical service to the Fifth Army and other U. S. troops in the Mediterranean Theater of Operations. He graduated from Wayne University College of Medicine, Detroit, in 1911 and entered the service July 15, 1942.

Captain A. Ebner Blatt

The Bronze Star was recently awarded to Capt. A. Ebner Blatt, formerly of Indianapolis. The citation stated that Captain Blatt "distinguished himself by heroic achievement in connection with military operations against the enemy. His coolness in face of danger and his complete disregard for his personal safety while evacuating wounded under enemy fire were in accordance with highest standards of military service." Dr. Blatt graduated from Indiana University School of Medicine, Indianapolis, in 1934 and entered the service Oct. 29, 1942.

Colonel Charles M. Downs

Col. Charles M. Downs, formerly of Indianapolis, was recently awarded the Bronze Star for meritorious achievement in connection with military operations. The citation states that "during the period of September 30 to October 20 Colonel Downs as surgeon of X Corps planned the movement for and the execution of the successful landing of X Corps medical units on the island of Leyte. During the operations from October 20 to December 20 he coordinated the activities of all medical units under X Corps control, attaining maximum effort. His leadership, superior knowledge, medical ability and untiring efforts contributed greatly to the saving of many lives through speedy evacuation and effective medical aid." Dr. Downs graduated from Indiana University School of Medicine, Indianapolis, in 1927 and entered the service Aug. 3, 1928.

Major Harold C. Adkins

Major Harold C. Adkins, formerly of Indianapolis, was recently awarded the Presidential Citation for his work during the Normandy invasion. He has been a participant in five major battles, including the invasion of Italy, both invasions of France, the Netherlands and Bastogne. Dr. Adkins graduated from Indiana University School of Medicine, Indianapolis, in 1928 and entered the service April 6, 1942.

MISCELLANEOUS

EPIDEMIOLOGICAL INFORMATION BULLETIN NO. 15

The Epidemiological Information Bulletin No. 15, recently released by the United Nations Relief and Rehabilitation Administration, states that tuberculosis and syphilis are the two most important health problems of liberated Manila.

Based on returns for the first three months of liberation, the death rate for pulmonary tuberculosis for a year has been calculated at 800 per hundred thousand inhabitants, or about twenty times that of the average American city. In ten weeks 2,045 new syphilis cases were found among the civilian population, and the incidence continues to increase. Gonorrhea is equally prevalent. Manila was one of the few cities of tropical Asia where malaria had been reduced to a low level. During the Japanese occupation the disease returned, and it now constitutes a serious problem. There has been no significant increase of other epidemic diseases.

War shattered cities in continental Europe are also suffering from serious epidemics. The mortality from pulmonary tuberculosis has more than doubled in Rome. Epidemics of bacillary dysentery of a severe type and of typhoid are spreading in Berlin, where diphtheria too is once more on the increase. There were 1,100 cases of typhoid during the first three weeks of August. At Helsinki, Finland, there have been 2,472 paratyphoid fever cases up to September 6. Diphtheria remains widespread in the Netherlands, where half of the cases now occur among adults.

The Epidemiological Information Bulletin is issued bimonthly by UNRRA in pursuance of responsibility delegated by the International Sanitary Conventions of 1944 for gathering and publishing official information regarding the incidence of epidemic diseases throughout the world.

UNRRA HEALTH PROGRAM IN CHINA

Dr. Leland A. Powers, former Health Director of the state of Washington and now chief medical officer for the United Nations Relief and Rehabilitation Administration in Chungking, recently reported the activities of the health program in China. Eighteen doctors, sanitary experts and nurses joined the staff in Chungking, a special training program for Chinese experts was completed, a serious cholera epidemic brought under control and action started on requests for speedy recruitment of approximately 200 additional medical persons for field operations.

Dr. Powers is developing the work of the UNRRA health division in cooperation with Dr. Chang Wei, chief medical officer of the Chinese National Relief and Rehabilitation Administration (CNRRA), and Dr. P. Z. King of the Chinese National Health Institute. A medical teaching project to instruct Chinese medical and public health personnel in the necessary technics for relief work got under way in the early summer.

To date over 100,000 pounds of medical supplies has been sent into China for use in the medical programs. The bulk of these vital supplies were shipped while China was still under Japanese occupation, and difficulties of closed ports and roads were circumvented by shipping the supplies to India and flying them from there "over the hump" of the Himalayas.

As the field work continues to extend into the devastated areas left by the retreating Japs, more medical teachers—general practitioners, nurses, bacteriologists and specialists of every description—are needed and are being recruited to help China launch her extensive medical relief program. It has been roughly estimated that in the next four years China will have to train 35,000 technicians to do the job. UNRRA is attempting to fill present requests from China for 200 medical field workers and has set a recruitment goal of 100 medical men and 30 nurses by the end of this year.

WARTIME GRADUATE MEDICAL MEETINGS

The following subjects and speakers for Wartime Graduate Medical Meetings have just been announced:

California

Birmingham General Hospital, Van Nuys: Surgery of the Biliary Tract, Capt. Howard K. Gray, November 14; Thoracic Surgery, Capt. W. L. Rogers, November 28.

U. S. Regional Hospital, Pasadena: Thyroid Disease, Lieut. Comdr. George Crile, November 12.

A. A. F. Regional Station Hospital, March Field: Compound Fractures, Comdr. P. E. McMaster, November 20.

U. S. Naval Hospital, Long Beach: Liver Disease Capt. John Ruddock, November 21.

Station Hospital, Camp Stoneman, Pittsburg: Plastic Surgery, Dr. George Pierce, November 17.

Hammond General Hospital, Modesto: The Use of Penicillin in Injuries and Infections, Dr. Horace J. McCorkle, November 21.

A. S. F. Regional Hospital, Oakland: Diagnosis and Management of the Lymphomas, Dr. Ernest H. Falconer, November 14.

Station Hospital, Fort Ord: Diseases of the Thyroid: Clinical Diagnosis and Management, Dr. Mayo H. Soley, November 17.

U. S. Naval Hospital Treasure Island: Interpretation and Misinterpretation of Certain Laboratory Tests, Dr. James Hopper, November 16.

Pennsylvania

U. S. Naval Hospital, Philadelphia: Clinical Significance of Diplopia, Dr. Walter I. Lillie, November 16.

QUARANTINE RESTRICTIONS WIDENED ON AIR TRAVEL

Under the jurisdiction of the International Sanitary Convention, quarantine restrictions on air travel were placed on several hundred additional square miles in Brazil and the Barotze province in northern Rhodesia. The restrictions became effective with the acceptance recently by the Standing Technical Committee on Health of a report of the Expert Commission on Quarantine redefining endemic yellow fever areas. The committee, which held its ninth regular meeting September 26 at UNRRA headquarters, also approved the progress report of the Health Division.

PHYSICIANS SEPARATED FROM SERVICE

ARMY MEDICAL CORPS OFFICERS RECOMMENDED FOR/OR RELIEVED FROM ACTIVE DUTY

Name Rank Address

Alabama

Bass, John B., Major, Bellevue Highlands, Gadsden.
Block, William H., Capt., Hartselle.
Borah, Charles E., Capt., Professional Bldg., Phoenix.
Edwards, Winston A., Capt., Notasulga.
Jackson, Thomas S., Capt., Clio.
McDowell, James F., Lt. Col., 2801 Ensley Ave., Birmingham.
Markheim, Herbert R., Major, Cullman.
Mason, James M., III, Major, 2721 Niazuma Ave., Birmingham.
Price, Lance C., Major, 401 E. Tuscaloosa St., Florence.
Ramey, Daniel R. Jr., Major, Hartselle.
Rosen, Herman L., Capt., 113 Montezuma Rd., Montgomery.
Simon, Harold E., Major, 3208 Norwood Blvd., Birmingham.
Simpson, Wyatt C., Major, 230 Broad St., Gadsden.

Arkansas

Bizzell, Ross, Capt., Baptist State Hospital, Little Rock.
Blankfort, Gerald, Major, 2519 N. Filmore St., Little Rock.
Hellums, Julius H., Major, Dumas.
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Williams, Carl R., Capt., 307 First Natl. Bank Bldg., Morrilton.

California

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Carnazzo, William A., Major, 411 Alvarado St., Monterey.
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McNeely, Geo. B., Capt., Stanford.
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Weymouth, Raymond E., Capt., 194 Main St., Bar Harbor.

Massachusetts

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Burke, Jacob B., Major, 182 Washington Ave., Chelsea.
Cogan, Michael A., Capt., 212 Chestnut St., Springfield.
Curran, Timothy L., Capt., 2143 Dorchester Ave., Dorchester.
Faxon, Henry H., Major, 309 Warren St., Brookline.
Goglia, Alfred A., Capt., 66 Broadway, Taunton.
Gordon, Sydney R., Capt., 208 Highland St., Worcester.
Grabfield, Gustave P., Col., 319 Longwood Ave., Boston.
Haight, Meyer H., Major, Main St., W. Warren.
Hunter, John J., 1st Lt., Cambridge Hosp., Cambridge.
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Nevada

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Palmer, John E., Capt., 425 Elm St., Reno.
Roche, Alan J., Major, Sparks.
Ross, Theodore V., Major, Ely.

New York

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Breed, Floyd M., Capt., 156 N. Broad St., Norwich.
Brown, Frederick R., Capt., 14 Earl St., Floral Park.
Carucci, Gabriel, Capt., 683 Hart St., Brooklyn.
Casey, Francis G., Jr., Capt., 497 13th St., Brooklyn.
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Colburn, Russel F., Lt. Col., Syracuse Mem. Hosp., Syracuse.
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Cooper, William, Major, 880 Manhattan Ave., Brooklyn.
Cooper William A., Lt. Col., 445 E. 65th St., New York.
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Vinje, Ralph, Capt., Beaulah.

Ohio

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Fridline, Gaylord D., Major, 217 Claremont Ave., Ashland.
Giannestras, Nicholas J., Major, 504 McAlpin Ave., Cincinnati.
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Grice, Francis V., Capt., 516 Evergreen Ave., Dayton.
Gustafson, Milton H., Capt., 10126 Fidelity Ave., Cleveland.
Hardesty, H. H., Capt., St. Vincent's Charity Hosp. Cleveland.
Harrison, Francis R., Capt., 301 W. Fifth St., E. Liverpool.
Harrold, Arvine W., Capt., 81 Jefferson St., Tiffin.
Hawk, Otho L., Capt., 15875 Brewster Road, E. Cleveland.
Henrie, Charles C., Capt., Celina.
Heywood, Howard W., Capt., Cincinnati GH, Cincinnati.
Hill, Frank R., Capt., 2898 Coleridge Rd., Cleveland Heights.
Holmberg, Robert E., Major, 2065 Adelbert Rd., Cleveland.
Horowitz, Martin M., Capt., 650 Carpenter St., Columbus.
Kasper, E. C., Capt., 16715 Invermere Rd., Cleveland.
Katzenmeyer, Walter R., Capt., 3545 Lytle Rd., Shaker Heights.
Kemp, H. A., Lt. Col., Dean School of Med., Ohio State Univ.
Kerns, Henri A., Capt., 230 S. Cherry St., Kenton.
Knisley, Earl P., Major, 506 S. Powell Ave., Columbus.
Kramer, John A., Capt., 310 N. Main St., Ada.
Lesar, George W., Jr., Capt., 2284 Bellfield Rd., Cleveland.
Long, Henry A., 1st Lt., 168 Chestnut St., Hamilton.
Lustberg, Alfred, Capt., 203 E. Mitchell Ave., Cincinnati.
McConnell, Paul R., Major, Ravine Drive, Youngstown.
McCormish, C. T., Capt., 1830 Highbridge Rd., Cuyahoga Falls.
Martin, John E., Major, 99 South Roosevelt Ave., Columbus.
Meiling, Richard L., Lt. Col., 898 Bryden Rd., Columbus.
Mitchell, James D., 1st Lt., 1134 Chittenden Ave., Columbus.
Namen, J. M., Major, 2937 Hampshire Rd., Cleveland Heights.
Patterson, Owen F., Major, Holmesville.
Peabody, Carroll A., Capt., 3571 Avalon Rd., Shaker Heights.
Peebles, Thomas A., Major, 2944 Pearl Ave., Lorain.
Peterson, Guy S., Jr., Capt., 10017 Edgewater Rd., Cleveland.
Potter, Floyd A., Major, 1849 Wellesley Dr., Toledo.
Pritchett, Clark P., Major, 463 E. Town St., Columbus.
Prochaska, Charles J., Lt. Col., 4486 Mayfield Rd., S. Euclid.
Riebel, John A., Capt., 232 Samaritan Ave., Ashland.
Rusoff, Maurice B., Capt., 1202 Bryden Road, Columbus.
Ryan, James E., Major, Kelleys Island.
Sadugor, Marvin G., Capt., Mt. Sinai Hosp., Cleveland.
Smith, Birna R., Capt., Lewisburg.
Sokol, Charles R., Major, 220 Francis St., Youngstown.
Spyker, Mitchell A., Capt., R. R. 1, Plain City.
Topinka, John A., Capt., 2331 Charney Rd., University Heights.
Watson, George B., Capt., 421 Richards Rd., Columbus.
Wilkinson, Herman E., Lt. Col., 205 Marsh Bldg., Van Wert.
Williams, Harold L., Capt., LaFayette.
Wirtz, Robert E., Capt., 1230 11th St. N.W., Canton.
Zeno, Ross R., Capt., 1410 W. Exchange St., Akron.

Oregon

Bailey, Paul, Major, 1515 S. W., Myrtle, Portland.
Boyden, Allen M., Major, 765 Jerome Ave., Astoria.
Dowsett, Jack W., Capt., 410 Medical Arts Bldg., Portland.
Fowler, Frank E., Lt. Col., 250 12th St., Astoria.
Gerber, Joseph H., Major, U. S. Veterans Hosp., Portland.
Kessler, Raymond L., Major, Box A, Pendleton.
Puziss, Abe, Capt., 2055 S. W. Park Ave., Portland.

Rhode Island

Miller, Himon, Major, 260 Olney St., Providence.
Koenig, Emil J., Jr., Capt., R. I. Hospital, Providence.

South Dakota

Lovre, Stanton C., Major, Humbolt.
Owen, Gordon S., Capt., Security Bldg., Rapid City.

Tennessee

Benz, Alvin H., Major, 417 W. Brow Rr., Lookout Mt.
Farrar, Turley, Capt., Baptist Hosp., Memphis.
Johnson, Charles C., Capt., Pressman's Home.
Olson, John R., Capt., B-2 Jefferson Apts., Nashville.
Pepper, Maurice L., Major, 1029 Stonewall, Memphis.
Shields, Lester H., Capt., Benton.
Von Canon, O. L., Major, Pied Piper Trail, Lookout Mountain.
Wilhelm, Walter L., Major, 727 W. Dr., Hein Park, Memphis.

Utah

Covington, Fen H., Capt., Orderville.
Ficklin, George C., Capt., P. O. Box 432, Tremonton.
Gorishek, William M., Capt., Castle Gate.
Gross, Norman H., Capt., Vet. Hosp., Salt Lake City.
Morgan, Sherman McK., Capt., 4620 S. State St., Murray.
Noyes, Kenneth E., Capt., 85 E. Main St., American Fork.

Vermont

Collins, Ray W. Jr., Major, Colchester.
Crowley, Joseph B., Capt., 114 Main St., Brattleboro.
Harwood, C. W., Capt., Mary Fletcher Hosp., Burlington.
Kingsley, Joyce W., Jr., Capt., 130 Loomis St., Burlington.
Mahoney, James P., Major, 288 Maple St., Burlington.
Orton, Carleton B., 1st Lt., Waterbury.
Twiss, Harry Y., Capt., 24 College St., Montpelier.

Virginia

Dow, Charles H., Major, Chilhowde.
Driver, Samuel F., Capt., P.O. Box 95, Troutville.
Earle, Alexander M., Jr., Capt., Sandston.
Farnsworth, D. I., Capt., Dept. Anat. Med. Coll. Va., Richmond.
Haden, Earl J., Lt. Col., Ore Bank.
Hudnall, Harry G., Capt., 423 W. Main St., Covington.
Kaufman, William H., Capt., 1831 Univ. Circle, Charlottesville.
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Williams, Harry P., Capt., 900 W. Fayette St., Martinsville.
White, Harry F., Lt. Col., Fisherville.

Wisconsin

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Callan, Robert E., Capt., 6903 W. Wisconsin Ave., Wauwatosa.
Cormack, William F., Capt., 1905 Lamont St., Wausau.
Kelly, William J., Capt., The Hilltop, Potosi.
Lappley, Walter F., Capt., 1303 W. Johnson St., Madison.
Morrison, Russell C., Capt., 23 E. Johnson, Madison.
Silbar, Sidney J., Major, 536 W. Wisconsin Ave., Milwaukee.
Skow, George D., Major, 1628 Holmes Ave., Racine.
Winslow, Fitz R., Capt., 1107 Ash St., Baraboo.
Zintek, Sylvester S., Lt. Col., 1575 S. 8th St., Milwaukee.

West Virginia

Bond, Dewitt T., Capt., Amherstdale.
Bickel, Carl S., Major, P.O. Box 670, Wheeling.
Davis, William W., Major, Beckley Hosp., Beckley.
Goodwin, Franklin H., Major, Riverside Dr., Welch.
Henderson, Oliver M., Major, 1 Chambers Ave., Elm Grove.
McCauley, Everette W., Lt. Col., Rainelle.
Walker, James H., Capt., 5050 Kanawha Ave., Charleston.

Wyoming

Bump, Robert I., Capt., 308-309 Hynds Bldg., Cheyenne.
Holtz, Paul R., Col., Box 3, Lander.
Miner, Paul F., 1st Lt., Connor Hotel Bldg., Laramie.

ORGANIZATION SECTION

REPORTS OF OFFICERS

NOTE.—At the 1925 session of the Association, the House of Delegates suggested that all reports of officers, committees, etc., and resolutions to be brought before the House, if available, be published in advance of the session so as to permit careful consideration and discussion. The Report of the Secretary, additional sections of the Report of the Board of Trustees and reports of some councils, bureaus and departments will appear in subsequent issues of The Journal.—Ed.

(Continued from page 561)

REPORT OF THE COUNCIL ON MEDICAL SERVICE AND PUBLIC RELATIONS

To the Members of the House of Delegates of the American Medical Association:

Immediately after the final session of the House of Delegates in June 1944 the Council on Medical Service and Public Relations met to organize.

Dr. John H. Fitzgibbon was elected chairman, Dr. E. J. McCormick vice chairman, and an executive committee was appointed consisting of the chairman, Dr. Fitzgibbon, the Trustee member, Dr. L. H. Bauer, and Dr. Alfred W. Adson. Following the resignation of Dr. Fitzgibbon as chairman, Dr. McCormick was elected chairman and Dr. James R. McVay vice chairman and member of the executive committee of the Council at its June 1945 meeting. The Washington office of the Council was established Sept. 1, 1944.

RELATIONS WITH OTHER DEPARTMENTS

It was felt that the first task of the Council should be to clarify its relations with the other Councils and Bureaus of the Association. Consequently a statement was drawn up covering this matter and submitted to the Board of Trustees the day following adjournment of the House of Delegates. The Board approved this statement, which follows:

Under the duties of the Council as laid down in the By-Laws, there are six definite fields which are somewhat interlocking:

1. To make available facts, data and medical opinions with respect to timely and adequate rendition of medical care to the American people.

This will require the services of the Bureau of Medical Economics in assembling statistical material, in making surveys and in preparing analyses of medical care plans for the Council's study. It will require the services of the Bureau of Legal Medicine and Legislation in preparing factual analyses of any legislative angles and it will require the services of the Department of Public Relations in spreading the information through the publications of the American Medical Association. The Council may also effect distribution of some of the information through its bulletins.

2. To inform constituent associations and component societies of proposed changes affecting medical care in the nation.

This, of course, concerns legislation. It should be one of the functions of the Washington office. The information assembled by the Washington office, and other sources of information, should be transmitted to the states and by them to the counties unless the states have requested that the counties be notified direct. Under the plan proposed by the Council and approved by the representatives of those states sending representatives to conferences already held, there should preferably be one man designated by the state who will serve as the contact agent of that state with the Washington office. The information should be sent to the contact agent whose duty it will be to distribute this information as directed by his own state. In cases in which the proposed bill alone is to be sent, it may be sent direct from the Washington office, with copies going to the Council office in Chicago and to the other association bureaus and departments concerned in the Chicago headquarters, with request for advice from the department concerned. In case a factual analysis is to be made, this will be done in collaboration by the Washington director and the Director of the Bureau of Legal Medicine and Legislation, by mail when time permits and, when it does not, by telephone. The same will apply when the implications of the bill are to be included.

3. To inform constituent associations and component societies regarding the activities of the Council.

This will be done by means of the Council's bulletins and with the cooperation of the Department of Public Relations, by means of the Association's publications.

4. To investigate matters pertaining to the economic, social and similar aspects of medical care for all the people.

This will involve both the methods covered in 1 and 2, as there will be required both economic investigations by the Bureau of Medical Economics and the legislative aspects of the matter concerned by the Bureau of Legal Medicine and Legislation. The information received from the Bureau of Medical Economics, from the Washington office and a legislative analysis of the same by the Bureau of Legal Medicine and Legislation would be compiled in the Chicago office for submission to the Council for its study.

5. To study and suggest means for the distribution of medical service to the public consistent with the principles adopted by the House of Delegates.

Based on the results of the first four activities, the Council will prepare its recommendations for the approval of the Board of Trustees or, in case new principles are involved, for submission to the next session of the House of Delegates.

6. To develop and assist committees on medical service and public relations originating within the constituent associations and component societies of the American Medical Association.

To do this a field agent is necessary. Many of the representatives attending the conferences on June 11 and the meeting of the House of Delegates expressed their desire for an arrangement whereby conferences could be held with state representatives. It was also recommended in the Supplementary Report of the Council. The idea of the Council is that this field agent should spend some time in Chicago, familiarizing himself with all the activities of the Council and should keep in frequent touch with the Chicago office thereafter. However, he should act as a direct contact between the Washington office and the state agents mentioned. Under the direction of the Washington director and with the approval of the Council, invitations would be issued to groups of states to attend conferences in central areas. The states would be asked to send their contact agents and such others as they see fit to these conferences. The states would be asked to effect an organization within the state so that quick action could be had in emergencies in bringing to the attention of members of Congress the attitude of the medical profession on certain bills. The contact with the congressmen would be by these local units. The field agent would outline the plan to them and offer such assistance as the states desired. Contacts could be kept up then by correspondence with the state agents and only occasional personal contacts thereafter.

The Washington director would be responsible for obtaining information on legislative or government departmental matters and transmitting it to the proper persons as outlined. He would have available all information possible on Association activities for the benefit of Congress and the government departments. He would see to it that both were informed that such a source of information was available for their use when desired. He would discuss bills with members of Congress when requested to do so by them or furnish them such information as requested by the congressman's constituents. He would never exert any pressure on any member of congress in an effort to influence his vote.

The director would develop sources of information gradually, and the Department of Public Relations would furnish him promptly with all information of a legislative nature which comes to it. The director would likewise keep the Department of Public Relations informed.

A part time legal counsel was recommended in the Council's Supplementary Report. The purpose of this counsel would be to give advice on the meaning of legal phraseology of bills and their legal implications, and the relationship of this bill to other legislation. For the present, at least, it would appear that this could be done by the Bureau of Legal Medicine and Legislation, although, in emergencies, some one on the ground would be essential.

There should also be a secretary to the director who should be a college graduate with secretarial training. A stenographer would also be necessary.

The director would function under the supervision of the Council or its executive committee.

SECRETARY

As Dr. G. Lombard Kelly's resignation took effect on July 1, 1944, the Council was without a secretary. Mr. J. W. Holloway Jr. was designated as acting secretary, which position he filled to the great satisfaction of the Council, although the work of the Council was seriously handicapped since Mr. Holloway, because of other duties, could devote only part of his time to the Council. In February 1945 arrangements were made with the Indiana State Medical Association for the loan of Mr. Thomas A. Hendricks on a part time basis.

BULLETINS, NEWS LETTER AND COUNCIL RELEASES

During the last few months three types of bulletins have been released under the direction of the Council:

News Letter.—The News Letter is sent to about 2,200 physicians who are state medical society officers and members of local public relations committees, to the members of the House of Delegates and to the officers of the American Medical Association. These letters are designed to serve the busy doctor as a periodic "briefing" on developments on the medical economic and political front.

Bulletins on Special Subjects.—Special bulletins covering events and reports on subjects not officially dealt with by other bureaus and councils are released by the Council on Medical Service and Public Relations. An example of such bulletins was the release giving a summarized report, with comments on the Fourth Interim Report of the Subcommittee on Labor and Education covering "Health of the Veteran." These bulletins go to 229 state medical society officers and are valuable in supplementing the information which appears in the Organization Section of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

Bulletins from Washington Office.—These bulletins are discussed in the report on the Washington Office by Dr. Joseph S. Lawrence, which is a part of this report.

Public Relations Kits.—These kits, which will be supplied to each delegate, will contain:

1. The fourteen point Program of the American Medical Association.
2. Objectives of the Council.
3. Articles that have appeared in THE JOURNAL on regional conferences.
4. Copies of the News Letter and Special Bulletins.
5. Bulletins from the Washington Office.
6. Legislative Résumé by the Bureau of Legal Medicine and Legislation.

Speakers' Kits.—The Council intends to supply as soon as possible "speakers' kits" to all who may be called on to give talks to medical societies or lay groups. Each kit will supply basic material that may be augmented and applied to local conditions as the circumstances warrant.

INSURANCE

One of the mandates of the House of Delegates was that the Council should employ a full time Director of Insurance. The Council feels that the field of voluntary insurance is one which perhaps is the most important of all for its activities at this time. Although the Council has striven to obtain the services of a qualified man, so far its efforts have been unavailing; but it hopes that the proper person will be obtained before the House meets again.

The immediate problems in this field are:

1. Bringing up to date the information on the various medical society indemnity and service plans.
2. Study of how they may be improved and extended.
3. Methods of stimulating the formation of new plans.
4. A study to bring up to date information on various industrial plans.
5. A study of commercial plans.
6. A study of the feasibility of a national plan.

The problem of voluntary sickness insurance has received much attention from the Council. With the cooperation of the directors of the various plans sponsored by county and state medical societies, a study is being made on this subject. A preliminary report on this survey appeared in the Aug. 18, 1945 issue of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION and other reports will follow from time to time. Several proposed plans for the formation of a national indemnity company have been submitted to the Council. In general these plans each proposed the formation of a company based on the Blue Cross organizations to sell indemnity insurance to employers having national payrolls and to utilize the facilities of local plans wherever they were available and to stimulate the formation of other such plans where none existed, the national company to withdraw from the field of competition wherever such existed. Sponsors of these plans claimed that, as far as medical policies and services are concerned, these were to be in the hands of the medical profession.

While in essence this was the proposal in each plan, there was no written confirmation of some of the points in any plans proposed, and, as these plans were indefinite in many of their points, the Council felt that it could not approve them. The Council did, however, relay to the sponsors of one plan, certain basic fundamentals which it felt would be necessary before any plan could hope to obtain the support of the medical profession. These fundamental points were that:

1. Any plan developed must deliver medical control of all medical policies and medical service into the hands of the medical profession.
2. The final approval of the selection of any medical control board set up under 1 should in the last analysis be by a responsible group of the organized medical profession.
3. The plan must not interfere with the development of either cash indemnity or service plans developed by local medical societies.
4. The practice of hospitals selling medical service is not approved, and the special services of anesthesiology, pathology, radiology or physical therapy or any other medical service should be in the medical contract and not in the hospital contract.

The Council received a delegation representing large and important insurance companies on the matter of a fee schedule for surgical and maternity care. This delegation asked the help of the Council to evaluate the various surgical procedures in order to grade the various procedures on a unit scale. After thorough discussion it was decided to appoint a consulting committee of surgical specialists to consider the feasibility for assessment of the various surgical procedures in a unit system for purposes of insurance reimbursement.

A Conference on Medical Service Plans to include discussion on the following points was planned but had to be postponed because of the restrictions on transportation:

Full Coverage vs. Limited Coverage.
Service vs. Indemnity (Reimbursement) Plans.
Actuarial Facts in Relation to Administrative Factors.
Relation of Medical Care Plans to Hospitalization.
Relation of Medical Societies to Administration of Medical Care Plans.
Relation of Specialist to Insurance Plans.
Interstate Coordination of Medical Care Plans.
Relation of N. P. C. to Prepayment Plans.
Indigent.
Rural Enrolment.
Individual Enrolment.
Low Cost-Low Benefit Plan.
Trade Territories vs. State Lines.
Income level.
Family Coverage.

INDUSTRIAL HEALTH

A joint meeting with the Council on Industrial Health was held Aug. 31, 1945. This would have been held earlier had not wartime restriction interfered. Details in regard to this meeting will be reported in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

CONTACTS WITH OTHER GROUPS

At the December 1944 meeting of the Council, conferences were held with representatives of the American Federation of Labor and with representatives of the various government agencies in Washington.

Two releases were drawn up and given to the press, both of which dealt with means of making the Platform of the American Medical Association an active program. Both of these releases were sent to the Council's mailing list.

Discussion was also had as to the advisability of legislation to further the aims of this program, and the Council's recommendation was referred to the Board of Trustees.

The Council has arranged a meeting to be held Oct. 18, 1945 in Chicago with representatives from the special obstetric, pediatric, orthopedic, heart and general practitioner groups to discuss the EMIC program.

SERVICE FELLOWSHIPS

The Council is very much disturbed over the fact that many Fellows of the American Medical Association have lost their fellowships while in the military service. While no one loses his membership so long as he remains in good standing in his county and state societies, which in most instances have remitted the dues of members in service, many have lost their Fellowship in the American Medical Association. As a result of this many men in service have not received the selected Association's publications. The Council, therefore, recommends that the necessary changes in the By-Laws be prepared for submission to the House of Delegates to provide that any Fellow entering the armed forces retain his Fellowship, and that all those who have been dropped as Fellows be reinstated and kept on the

list of Fellows until the end of the war or six months after the termination of their military service. Such Fellows, of course, would not be entitled to receive any of the journals unless they subscribed but their status as Fellows would be protected.

CHRONIC DISEASE, INCLUDING CANCER

The Council recommended that a committee on chronic diseases be set up by the Board of Trustees, as that particular field does not seem to fall within the province of any existing council or committee of the American Medical Association.

The executive director of the American Cancer Society appeared before the Council and asked that the American Medical Association set up guiding standards for cancer clinics to be operated under the supervision of the county medical societies.

It was voted that the Council appoint an advisory committee to confer with the American Cancer Society until such time as the Board of Trustees appoints a committee on chronic diseases when it seems feasible that this latter committee should take over the work. The purpose of this advisory committee is to go into the objectives of the American Cancer Society and to draw up general standards for cancer clinics when and where such clinics are operated with the approval of county medical societies. The Council feels that each state society should have such advisory committees.

INTERIM AUTHORITY

The Council feels that authority should be given to some group to act on questions of public policy in the interim between meetings of the House of Delegates. While the House of Delegates is the policy making body of the Association, and rightly so, nevertheless, emergencies arise which should be met promptly, and the delay of awaiting a decision of the House might prove disastrous. Hence the Council recommends that either the Board of Trustees or the Executive Committee of the Board and the executive committee of the Council, acting jointly, be given authority to determine the stand of and initiate appropriate action for the American Medical Association when urgent questions arise.

LEGISLATION

The Council has also considered many legislative matters, especially the Hill (Colorado)-Burton (Ohio) bill (S. 191), the Ellender (Louisiana) bill (S. 637), the Wagner (New York)-Murray (Montana)-Dingell (Michigan) bills (S. 1050 and H. R. 3293) and the Pepper (Florida) bill (S. 1318) to extend the EMIC program.

WASHINGTON OFFICE

Report of Washington Office by Dr. Joseph S. Lawrence, Director:

The Washington Office of the Council on Medical Service and Public Relations, located on the ninth floor of Doctors' Hospital, 1835 I Street N.W., was formally opened on Sept. 1, 1944. Considerable difficulty was experienced in obtaining priorities for both personnel and equipment. However, eventually the necessary authority was obtained and, while the office space, equipment and staff are still far from adequate, they are the best that can be obtained at present.

Bulletins.—At once steps were taken to establish relationships with the state associations. The officers of each association were asked to select persons in their associations with whom they expected the office to communicate. This list of names became the nucleus for a bulletin and mailing list.

Hearings.—Early in September two congressional committees were holding important hearings, a subcommittee of the Senate Committee on Education and Labor was holding hearings on the general subject of wartime health and education; a committee of the House of Representatives, also a subcommittee of the House of Representatives Committee on Labor was holding hearings at which testimony was taken as to the economic situation of the physically handicapped. In September the field of the aid to the deaf and the hard of hearing was particularly explored. These hearings were attended and reported, abstracts being made from the statements handed in by the witnesses. These abstracts were distributed to those on our mailing list by a series of bulletins.

The bulletins were very well received and many requests were sent in for the addition of names to the mailing list. The list started with probably 300 names and at present there are approximately 700 names.

Report of Bills.—With the inauguration of the new Congress, the 79th, the office began to report through the mailing list the bills as they were introduced which have a bearing on health or medical practice. The bill is reported by number, the name of its introducer and the committee to which it is referred. If possible it is ascertained from the introducer his particular reason for asking for legislation of this character. A short statement is made of what the bill contains if the title is not too clear. Mr. Holloway, Director of the Bureau of Legal Medicine and Legislation, will analyze and interpret the bills and distribute that information through his mailing list. Notification will be made in the bulletins of any hearings that may be announced and the status of bills reported out of committee. To date twenty-nine House bills and eight Senate bills have been reported.

Congressman Arthur L. Miller (Nebraska), a physician, introduced early in the session of the 79th Congress a bill (H. R. 1391) providing for the assembling of the various health activities now distributed among more than a score of federal departments and bureaus into one department, the United States Public Health Service. He argues that such an arrangement would be both more efficient and economical than the present conditions. He also provided in the bill for the creation of a position in the President's cabinet for a Secretary of Health. The hearings conducted by the Subcommittee on Postwar Planning during the last summer and autumn were very informative and enlightening on the state of health and medical conditions in the nation. The principal finding is that conditions in the rural areas are definitely inferior to what can be expected in urban areas but at present the congestion of population in industrial areas, especially where defense plants are located, has produced a severe strain on health and medical facilities there also.

Testimony at these hearings was given by prominent leaders and authorities in health and medical societies, industry, labor, education, agriculture and social affairs. A common refrain from all was the discouraging ignorance of what is good health and the lack of interest on the part of many in achieving or maintaining it. There is an obvious need for a widespread health education program. Industrial leaders testified to the benefits derived from the institution of scientifically prepared and supervised nutritional opportunities in their factories. Educators told of the great advantages school children are reaping where the schools provide luncheons. The ignorance of the average individual of the facts of proper diet and living conditions is deplorable, they declared.

Outgrowths of these hearings and stimulated by them are a number of bills: (1) The Hill (Colorado)-Burton (Ohio) Hospital bill (S. 191), which would aid rural districts to procure needed hospital facilities, (2) Weiss (Pennsylvania) (H. R. 2044) and Hartley (New Jersey) (H. R. 2045) Physical Fitness bills and (3) several proposals to aid schools to provide the children with supplementary luncheons.

It was also brought out at the hearings that the principal cause for classification as 4-F was illiteracy and, second, mental conditions unsuitable for combat war. About 16 per cent of those classified as 4-F could probably be cured or improved by suitable medical attention; but a startling observation was reported in this connection, namely that in a certain district disqualifying defects found by the Selective Service examining board had been discovered years before by school examining physicians and reported to the parents but never corrected.

Providing adequate medical care for the veterans is looming up as the major health and medical problem for the next few years. A number of bills are before Congress suggesting needed changes in the present laws. These bills should receive careful study by us: H. R. 650 Allen (Louisiana), H. R. 1513 Kildey (Texas), H. R. 1661 Rogers (Massachusetts), H. R. 2253 Priest (Tennessee), H. Res. 172, H. Res. 186 Rankin (Mississippi), H. R. 2611 Latham (New York) and H. R. 2920 Rogers (Massachusetts).

Another investigation in progress is the rehabilitation of the handicapped. Measures are being developed to help especially the blind and hard of hearing to adjust and adapt themselves so as to be self supporting. Among such bills are H. R. 141 Voorhis (California), H. R. 1411 Angell (Oregon), H. R. 1415 Angell (Oregon), H. R. 2020 Voorhis (California) and H. Res. 45 Kelley (Pennsylvania).

Grave concern was manifested over the decision of the Selective Service to discontinue deferring students who desire to enter the medical profession. Senator Ellender of Louisiana, having endeavored to have the Army reconsider its action without avail, introduced a bill (S. 637) hoping to secure the approval of Congress. His bill is being considered by the Military Affairs Committee. The committee has been informed that if the regulation is permitted to stand the enrolment of students in 1946 will be grealy reduced. Representative Walter H. Judd of Minnesota had introduced an identical bill in the other House.

Two unique bills are H. R. 2969 Eberharter (Pennsylvania), which provides that any physician holding a license to practice in any state shall, when discharged from service, be entitled to receive a certificate granting him the right to practice in any state of his choosing, and S. 837 Langer (North Dakota), which would have the federal government pay to parents $500 on the birth of their second child, $750 on the birth of the third and $1,000 for the fourth and each additional child. The perennial bill H. R. 491 Lemke (North Dakota) opposing the employment of the dog in research has reappeared.

Senators Wagner of New York and Murray of Montana introduced a revised edition of the 1943 health insurance bill (S. 1050). An identical bill was introduced in the House of Representatives at the same time by Congressman Dingell of Michigan (H. R. 3293). Legislation has been introduced in both houses (S. 1072 Johnson Colorado), H. R. 3310 Rankin (Mississippi) and H. R. 3317 Rogers (Massachusetts) providing for the creation of a Department of Medicine and Surgery in the Veterans Administration. Congressman Priest of Tennessee has introduced a bill (H. R. 2550) providing for the creation of a National Neuropsychiatric Institute. Senator Pepper of Florida and some other senators jointly are sponsoring an identical bill in the Senate.

When requested, the Association's position or views on legislation under consideration by committees have always been presented by properly selected representatives.

Conferences.—As the establishment of the Washington office is becoming known among government bureaus, requests for consultation and information are being received. When the requests are of a specific character, they are referred to the particular Council in Chicago for reply. Congressmen also have called for assistance in discussing the value or merit of certain proposals of legislation. The manner in which both representatives of the bureaus and of Congress received the knowledge that the American Medical Association has established and is conducting such an information bureau in Washington has been abundantly gratifying.

Office.—The Washington office is still very much cramped for office space, but we are not the only ones in Washington who are suffering because of lack of space and personnel. The government takes over all of the extra space as it becomes available, and those with priorities take out the best of the personnel; but our future does not look too dark. As for personnel, we hope in time to find an ex-serviceman who will qualify as secretary for us. The friendly reception which has greeted us everywhere that we have gone in Washington leads us to believe that the office has a very bright future.

REGIONAL CONFERENCES

Another feature of the program has been the conduct of regional meetings. The first of these was held back in May 1944, when Dr. Roger I. Lee invited representatives of the New England states to a conference at the Harvard Club of Boston. The director of the Washington office was also invited and outlined the proposed program for that office. Since the 1st of September, five other conferences have been held. The first was in Cincinnati, to which representatives from Ohio, Indiana, Kentucky and West Virginia were invited. The conference was well attended and interest was very encouraging.

The second conference formed a part of an annual conference held by the physicians for the North Central states. Dr. Adson and the director of the Washington office were invited to take part in the program, at which time the plan of the Council was presented and thoroughly discussed.

The Council met in Washington early in December, and at the close of the meeting the third regional conference was held, to which representatives of the Atlantic Coast states were invited. Subsequently other conference have been held. One for the Central states was held at Kansas City, one in Atlanta for the states of the Southeast and later one in Portland, Ore., to which representatives of the West and Northwest were invited.

The program of the conferences has developed and with each conference some changes have been incorporated. At present the forenoon program is given over to the secretaries of various Councils of the American Medical Association, each taking a brief time for outlining the program of his Council and an opportunity is given for discussion after each presentation. In the afternoon the delegates are invited to introduce any subject for discussion that they may choose. In most instances the principal subject has been that of voluntary insurance, each state making a report on what its experience has been and what future program it has outlined. These discussions have been most informative and are proving very helpful. On the whole the program of these conferences is twofold: first, to acquaint the state officials with the program of the Council and the part to be played by the Washington office; second, to make the acquaintance of the state representatives and receive their suggestions as to what they expect of the Council. The attendance has been approximately thirty-five to fifty persons. Minutes are taken, mimeographed and distributed to those in attendance or who were invited to attend.

ADDITIONAL TALKS

In addition to the regional conferences, individual members of the Council have spoken at more than fifty meetings throughout the year. Talks were given before county and state medical societies, and on numerous occasions members of the Council made additional talks before lay groups or appeared on radio programs and discussed the work of the Council.

CONSTRUCTIVE PROGRAM FOR MEDICAL CARE

Perhaps the most effective work done by the Council during the past year was the preparation of the fourteen point "Constructive Program for Medical Care" with the approval of the Board of Trustees of the American Medical Association, which appeared in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION for July 21, 1945 and was simultaneously released to the newspapers and to the radio throughout the country. This program follows:

CONSTRUCTIVE PROGRAM FOR MEDICAL CARE

AMERICAN MEDICAL ASSOCIATION

This platform was adopted by the Council on Medical Service and Public Relations and the Board of Trustees of the American Medical Association on June 22, 1945

Preamble

The physicians of the United States are interested in extending to all people in all communities the best possible medical care. The Constitution of the United States, the Bill of Rights and the "American Way of Life" are diametrically opposed to regimentation or any form of totalitarianism. According to available evidence in surveys, most of the American people are not interested in testing in the United States experiments in medical care which have already failed in regimented countries.

The physicians of the United States, through the American Medical Association, have stressed repeatedly the necessity for extending to all corners of this great country the availability of aids for diagnosis and treatment, so that dependency will be minimized and independence will be stimulated. American private enterprise has won and is winning the greatest war in the world's history. Private enterprise and initiative manifested

through research may conquer cancer, arthritis and other as yet unconquered scourges of humankind. Science, as history well demonstrates, prospers best when free and unshackled.

Program

The physicians represented by the American Medical Association propose the following constructive program for the extension of improved health and medical care to all the people:

1. Sustained production leading to better living conditions with improved housing, nutrition and sanitation which are fundamental to good health; we support progressive action toward achieving these objectives:

2. An extended program of disease prevention with the development or extension of organizations for public health service so that every part of our country will have such service, as rapidly as adequate personnel can be trained.

3. Increased hospitalization insurance on a voluntary basis.

4. The development in or extension to all localities of voluntary sickness insurance plans and provision for the extension of these plans to the needy under the principles already established by the American Medical Association.

5. The provision of hospitalization and medical care to the indigent by local authorities under voluntary hospital and sickness insurance plans.

6. A survey of each state by qualified individuals and agencies to establish the need for additional medical care.

7. Federal aid to states where definite need is demonstrated, to be administered by the proper local agencies of the states involved with the help and advice of the medical profession.

8. Extension of information on these plans to all the people with recognition that such voluntary programs need not involve increased taxation.

9. A continuous survey of all voluntary plans for hospitalization and illness to determine their adequacy in meeting needs and maintaining continuous improvement in quality of medical service.

10. Discharge of physicians from the armed services as rapidly as is consistent with the war effort in order to facilitate redistribution and relocation of physicians in areas needing physicians.

11. Increased availability of medical education to young men and women to provide a greater number of physicians for rural areas.

12. Postponement of consideration of revolutionary changes while 60,000 medical men are in the service voluntarily and while 12,000,000 men and women are in uniform to preserve the American democratic system of government.

13. Adoption of federal legislation to provide for adjustments in draft regulation which will permit students to prepare for and continue the study of medicine.

14. Study of postwar medical personnel requirements with special reference to the needs of the veterans' hospitals, the regular army, navy and United States Public Health Service.

Respectfully submitted,

E. J. McCormick, Chairman.
James R. McVay, Vice Chairman.
Alfred W. Adson.
Louis H. Bauer.
W. R. Brooksher.
John H. Fitzgibbon.
Herman L. Kretschmer.
Thomas A. McGoldrick.
James E. Paullin.
Olin West.
Thomas A. Hendricks, Secretary.

REPORT OF THE BOARD OF TRUSTEES

Bureau of Legal Medicine and Legislation

Customarily the annual report of the Bureau covers only the preceding calendar year. Owing to the delayed session of the House of Delegates this year, the present report will include references to matters that have occurred not only during the year 1944 but also during the current year.

CHEMICAL TESTS FOR INTOXICATION

Since 1937 the committee created by the House to study problems of motor vehicle accidents has studied carefully the relation of the action of alcohol to traffic accidents. In this study it has collaborated closely with the Committee on Tests for Intoxication of the National Safety Council. It has on several occasions recommended definite borderline limits for alcoholic influence in terms of amount of alcohol in the suspected drunken driver, and these limits have been approved by the House. In order to promote uniformity in state legislation in this field, the National Safety Council, through its Committee on Tests for Intoxication and with the active collaboration of the Bureau, has formulated a draft of a uniform bill which embodies the borderline limits approved by the House. The draft does not undertake to compel a driver suspected of being drunk to submit to a chemical test for intoxication. It does give legislative recognition of the borderline limits and assures that the results of the tests will be admissible in evidence. This draft was submitted to the Board of Trustees and was approved in principle. A similar approval by the House will be helpful in promoting the enactment of the law. The draft, in form, is an amendment to section 54, act V, of the Uniform Vehicle Code, and reads as follows:

Sec. 54. Persons under the influence of intoxicating liquor or of drugs.—(*a*) It is unlawful and punishable as provided in subdivision (*d*) of this section for any person who is under the influence of intoxicating liquor to drive or be in actual physical control of any vehicle within this state.

(*b*) In any criminal prosecution for a violation of subdivision *a* of this section relating to driving a vehicle while under the influence of intoxicating liquor, the amount of alcohol in the defendant's blood at the time alleged as shown by chemical analysis of the defendant's blood, urine, breath or other bodily substance shall give rise to the following presumptions:

1. If there was at that time five-hundredths per cent or less by weight of alcohol in the defendant's blood, it shall be presumed that the defendant was not under the influence of intoxicating liquor;

2. If there was at that time in excess of five-hundredths per cent but less than fifteen-hundredths per cent by weight of alcohol in the defendant's blood, such fact shall not give rise to any presumption that the defendant was or was not under the influence of intoxicating liquor, but such fact may be considered with other competent evidence in determining the guilt or innocence of the defendant;

3. If there was at that time fifteen-hundredths per cent or more by weight of alcohol in the defendant's blood, it shall be presumed that the defendant was under the influence of intoxicating liquor;

4. The foregoing provisions of this subdivision shall not be construed as limiting the introduction of any other competent evidence bearing upon the question whether or not the defendant was under the influence of intoxicating liquor.

(*c*) It is unlawful and punishable as provided in subdivision *d* of this subsection for any person who is a habitual user of or under the influence of any narcotic drug or who is under the influence of any other drug to a degree which renders him incapable of safely driving a vehicle to drive a vehicle within this state. The fact that any person charged with a violation of this subsection is or has been entitled to use such drug under the laws of this state shall not constitute a defense against any violation of this subsection.

(*d*) Every person who is convicted of a violation of this section shall be punished by imprisonment for not less than ten days nor more than one year, or by fine of not less than $100 nor more than $1,000, or by both such fine and imprisonment. On a second or subsequent conviction he shall be punished by imprisonment for not less than ninety days nor more than one year, and, in the discretion of the court, a fine of not more than $1,000.

The commissioner shall revoke the operator's or chauffeur's license of any person convicted under this section.

COMMITTEE TO STUDY THE RELATIONSHIP OF MEDICINE AND THE LAW

At the Cleveland, 1941, session a resolution was introduced calling for the appointment of a committee to survey the relationship of medicine and the law "with particular reference to the manner in which this relationship is exercised in those counties which still cling to the coroner system." It was contemplated that the committee would confer with a corresponding committee of the American Bar Association and that

information developed would be made available to state medical associations. The House referred the resolution to the Board, requesting systematic study of the problem involved.

The Board did give consideration to the resolution and appointed the suggested committee. The American Bar Association likewise designated a collaborating committee. A progress report was submitted to the House at the Chicago, 1943, session and a continuation of the committee was authorized in order that its work might be completed. A further and more comprehensive report was submitted to the House at the Chicago, 1944, session but through inadvertence this report did not receive consideration by a reference committee and therefore was not acted on by the House. It is felt that the House may wish to take some action on the 1944 report of the committee at the forthcoming session in Chicago. Printed copies of the report are available for study.

PRESCRIBING NARCOTICS BY TELEPHONE

The United States Commissioner of Narcotics has called the attention of the Association to the difficulty that is resulting throughout the country because of the frequency with which physicians telephone narcotic prescriptions. This practice, he reports, has resulted in abuse and illicit traffic, many pedlers and addicts using this means to obtain morphine. A federal grand jury investigation has resulted in one community, and the report following the investigation described the facts developed as disclosing a shocking disregard of the law and as reflecting a condition "intolerable and wholly unwarranted." Under existing regulations, the furnishing of narcotics pursuant to telephone advice of physicians is prohibited whether prescriptions covering such orders are subsequently received or not, except in an emergency. In case an emergency does arise, a druggist may deliver narcotics through his employee or responsible agent pursuant to a telephone order only if the employee or agent is supplied with a properly prepared prescription before delivery is made, and this prescription must be turned over to the druggist and filed by him as required by law. As suggested in a Current Comment published in THE JOURNAL, Aug. 11, 1945, physicians will aid materially in preventing the abuses referred to by the Commissioner of Narcotics if they restrict orders for narcotics by telephone strictly to actual cases of emergency.

ISONIPECAINE

In the report of the Bureau transmitted to the House in 1944, reference was made to a suggestion by the Commissioner of Narcotics that Demerol, be brought within the purview of narcotic laws. The House of Delegates adopted a recommendation of the reference committee on legislation and public relations in support of restricting the sale of Demerol (isonipecaine) in this manner. A federal law has now been enacted to accomplish this end (Public Law No. 414, 78th Congress). Similar laws have been enacted in twenty-two states: Alabama, California, Connecticut, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Minnesota, Mississippi, New Jersey, New York, North Dakota, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Vermont, Virginia and Wisconsin.

INFORMATION FOR MEDICAL OFFICERS

The Bureau has cooperated with the Bureau of Information in supplying medical officers with available information with respect to licensure requirements. A considerable number of such inquiries have been received and answered. They have fallen in one of four general classifications: (1) those relating to reciprocity, (2) those relating to requirements for licensure where the medical officer by reason of entry into service was prevented from obtaining a license, (3) those from graduates of unapproved schools who have inquired if, by reason of military service, the states in which they otherwise would be unable to qualify would grant them licenses and (4) those relating to benefits made available to medical officers by the G. I. Bill of Rights.

Interest has been manifested, too, by a number of medical officers in the bill introduced in Congress by Representative Eberharter of Pennsylvania, H. R. 2969, under the provisions of which a medical officer, on honorable discharge, would be entitled to practice in any state of choice without compliance with the laws of that state provided he was licensed in any state prior to entry into service. Further comment on this bill will be made later in this report.

Cooperation was additionally given the Bureau of Information in the preparation of its Bulletin for Medical Officers.

ENABLING ACTS FOR MEDICAL SERVICE PLANS

Early in 1945 a compilation was made available of the laws that had been enacted at that time under which nonprofit prepayment medical service plans may be created and operated. This compilation, in pamphlet form, contains verbatim copies of the laws in thirteen states: California, Connecticut, Massachusetts, Michigan, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Vermont, Virginia and West Virginia. Ready access to these laws will be of value to state medical associations and their attorneys in the preparation of enabling laws for their states.

During the 1945 legislative session, laws with similar objectives were enacted in ten additional states: Florida, Illinois, Iowa, Kansas, Maryland, Minnesota, North Dakota, Rhode Island, Tennessee and Wisconsin. Laws of this character failed of enactment in Colorado and South Dakota. The enabling act of New Hampshire was amended to permit reciprocal relations with medical service corporations of other states.

These new laws will be included in a supplement to the compilation that has already been made available. During 1945 the services of the Bureau were utilized in the drafting of legislation for prepayment medical service plans in a number of states.

COMPULSORY SICKNESS INSURANCE

The current legislative year witnessed a number of proposals in state legislatures looking toward the establishment of compulsory sickness insurance schemes. None passed. The controversy was particularly acute in California, where several bills of this nature were before the legislature, one being commonly referred to as the Governor's Bill and another as the C. I. O. Bill. Other states in which similar legislation was proposed included Connecticut, Massachusetts, Michigan, New Mexico, New York, Wisconsin and Washington. Legislation was also introduced in a number of states to provide a system of compulsory cash benefits for unemployment due to sickness, similar to the Rhode Island law, including California, Colorado, Connecticut, Massachusetts, Minnesota, Montana, Nevada and New Jersey. None passed.

BLOOD BANKS

During 1944 and 1945, laws providing for the establishing of blood banks for civilian use were enacted in Illinois, Michigan, Montana, New Jersey, New York, North Dakota, Ohio and Vermont. Similar legislation failed of enactment in Alabama, California, Indiana and Kansas. In Missouri a bill is still pending.

LAWS FOR ESTABLISHMENT OF MEDICAL SCHOOLS

Legislation was introduced in seven states in 1945 either providing for new medical schools or authorizing studies to determine the advisability of establishing such institutions. In Florida a law became effective without the approval of the governor, authorizing the city of Tampa to establish a state university to include a school of medicine. In Massachusetts a law was enacted designating a commission to investigate the advisability of establishing a state university to include medical, dental, veterinary and osteopathic schools. In North Carolina the board of trustees of the university, with the approval of the governor and the North Carolina Medical Commission, was authorized to expand the two year medical school of the University of North Carolina into a standard four year medical school. In North Dakota there was created a Medical Center Advisory Council with authority, among other things, to formulate plans for a unified program for the improvement of the health of the people of the state, including ways and means for bringing about the complete training of adequate numbers of qualified physicians for the state, both in the general practice of medicine and surgery and in the field of public health. In South Dakota a new law was enacted authorizing an appropriation of $150,000 to establish, equip and maintain a four year medical school at the South Dakota University. In West Virginia an interim committee was appointed to study the advisa-

bility of establishing a four year school of medicine in the state. In Washington a law was enacted establishing a medical and dental school at the University of Washington. A bill is still pending in Missouri contemplating the establishment of a medical school.

FEDERAL LEGISLATION

Seventy-Eighth Congress

The Seventy-Eighth Congress adjourned sine die Dec. 19, 1944. All legislation not finally acted on prior to adjournment died. During the Seventy-Eighth Congress 9,536 bills, joint, concurrent and simple resolutions, were introduced in the Senate and House. A total of 1,157 laws were enacted. Of the total bills introduced, approximately 390 were of sufficient medical interest to justify the publication of either brief or extended analyses of them in THE JOURNAL.

During the closing months of the Congress the following laws of interest to medicine were enacted:

The Public Health Service Act, consolidating and revising the laws relating to the service. Included in this law is a new authorization for an appropriation of $10,000,000 for the fiscal year ended June 30, 1945 to develop more effective measures for the prevention, treatment and control of tuberculosis. Thereafter, such sums are authorized as may be needed. The law also continued in force a provision that for the duration of the war and for six months thereafter graduates of reputable osteopathic colleges shall be eligible for appointment as "reserve officers in the service." Too, the law authorizes the Surgeon General to make grants-in-aid to universities, hospitals, laboratories and other public or private institutions and to individuals for such research projects as are recommended by the National Advisory Health Council or, with respect to cancer, recommended by the National Advisory Cancer Council. The limit on the authorization of appropriation for venereal disease control was removed and the authorized appropriation for aid in establishing and maintaining public health services in the states was increased from $11,000,000 to $20,000,000 annually.

The G. I. Bill of Rights. A detailed analysis of this law was prepared by the Bureau and published in THE JOURNAL, July 15, 1944. Certain provisions of it are of particular interest to physicians in service, namely those relating to refresher and postgraduate courses and those relating to the guaranty of loans for the purchase of equipment and supplies to be used in a gainful occupation. The benefits of this law are available to commissioned and noncommissioned personnel alike. Prior to June 29, 1945 much uncertainty obtained as to whether a commissioned officer of the Public Health Service would be entitled to the full benefits of this new law. On that date the President, by Executive Order No. 9575, declared the commissioned corps of the Public Health Service to be a military service and by that action removed all doubts as to the availability of the benefits of the law to members of such commissioned corps.

Additional appropriations for the EMIC program. Two additional appropriations were made available to continue this program, one in the amount of $6,700,000 and the other in the amount of $42,800,000 plus $43,000 for administrative expenses of the Children's Bureau. Through the Seventy-Eighth Congress a total of $73,743,000 has been specifically allotted by Congress for providing obstetric and pediatric care to the beneficiaries of the program. To initiate the program $390,477 from the regular appropriation authorized for maternal and child health activities was used.

Limitation of production of opium. A new law requests the President to approach the governments of all opium-producing countries throughout the world, urging on them that they take immediate steps to limit and control the growth of the opium poppy and the production of opium and its deriviatives to the amount actually required for strictly medicinal and scientific purposes.

Services in the Medical Reserve Corps in relation to pay. By reason of a decision of the Comptroller General, former members of the Medical Reserve Corps were denied the right to include the time they served in that corps in the computation of their pay. A law was enacted by the Seventy-Eighth Congress under which such service may be included.

Department of Agriculture Organic Act of 1944. This law contains a provision that none of the money made available in the Department of Agriculture Appropriation Act, 1944, for loans, grants and rural rehabilitation may be used in the promotion or aid of any program of medical care which prevents a patient from having the services of any practitioner of his choice so long as there is a compliance with state laws. This restriction, however, is not applicable to the promotion or aid of a program of medical care where a majority of the participants within the program group elect to confine their choice of practitioners to a list of available licensed practitioners selected by them.

Seventy-Ninth Congress

The first session of the Seventy-Ninth Congress convened Jan. 3, 1945 and is in progress at the time this report is being prepared. Of the many important bills of medical interest which have been introduced, the following deserve consideration:

Industrial Health Under Jurisdiction of Labor Departments.—A bill, H. R. 525, is pending in the House of Representatives, with a favorable committee report, to provide for cooperation with state agencies administering labor laws in establishing and maintaining safe and proper working conditions in industry and in the preparation, promulgation and enforcement of regulations to control industrial health hazards. An appropriation of $5,000,000 will be made available annually to the Secretary of Labor for allotment to cooperating state agencies administering labor laws. While the bill provides that, in the operation of plans to be developed, the available services and facilities of public health authorities in the field of industrial hygiene shall be utilized, sums that will be alloted must be expended in accordance with rules and regulations prescribed by the Secretary of Labor and plans jointly developed by the agency administering labor laws of the states and the Division of Labor Standards and approved by the Secretary of Labor. This bill, if enacted, will confer on labor departments, on federal and state levels, jurisdiction over industrial health problems. A companion bill, S. 1271, has been introduced by Senator Johnston, South Carolina, for himself and Senator Ball, Minnesota. It is pending in the Senate Committee on Education and Labor.

At the Kansas City, 1936, session of the House, a resolution was adopted relating to industrial health hazards in which was expressed the conviction that "any active efforts by governmental agencies to study and to take measures tending to eliminate occupational diseases should be carried out under the supervision of the city, state or federal departments of health in this country." On July 8, 1939 the Council on Industrial Health adopted a resolution, subsequently approved by the Board of Trustees in February 1940, to the effect that "the interests of the industrial worker will best be served by continued concentration of industrial hygiene in the federal and state health departments.

Legislation similar to the pending bill was introduced in the Seventy-Eighth Congress. At the Chicago, 1944, session a resolution was introduced in the House expressing opposition to the legislation and reaffirming the belief that "any extension of governmental activities in the field of industrial health and hygiene should be developed under the supervision and guidance of the U. S. Public Health Service and state departments of health." The Reference Committee on Legislation and Public Relations, in recommending disapproval of the resolution, said "Your reference committee feels that the work described in H. R. 4371 could best be done through the state and local authorities with monies allotted to them by the Secretary of Labor rather than through the United States Public Health Service as suggested in this resolution." The report of the reference committee was adopted.

In the report of the Bureau submitted to the House last year, reference was made to the then pending industrial hygiene bill. The report of the Bureau was referred to the Reference Committee on Report of Board of Trustees and Secretary, which committee, in referring to the industrial hygiene bill, said "A pending bill conferring jurisdiction over industrial hygiene on labor departments requires additional study." The report of the reference committee was adopted.

Two other actions taken by the House last year involved to a great extent the same principle involved in the industrial hygiene bill. The House adopted a resolution to transfer the EMIC program from the Department of Labor to the United States Public Health Service. It recorded its approval of the Miller bill proposing to transfer all government agencies dealing with health to the United States Public Health Service.

In view of the foregoing, the House may wish to reconsider the implications inherent to H. R. 525 and to clarify its opinion with respect to the bill.

National Neuropsychiatric Institute.—Companion bills are pending respectively in the Senate Committee on Education and Labor and in the House Committee on Interstate and Foreign Commerce proposing to enact a National Neuropsychiatric Institute Act, S. 1160, introduced by Senator Pepper, Florida, for himself and Senator Thomas, Utah, Senator Tunnell, Delaware, Senator Hill, Alabama, Senator Murray, Montana, Senator LaFollette, Wisconsin, and Senator Aiken, Vermont, and H. R. 2550, introduced by Representative Priest, Tennessee. This legislation would establish in the United States Public Health Service a National Neuropsychiatric Institute with the following functions: (1) to conduct researches, investigations, experiments and demonstrations relating to the cause, diagnosis and treatment of neuropsychiatric disorders; (2) to assist and foster similar research activities by other agencies, public and private, and to promote the coordination of all such researches and activities and the useful application of their results; (3) to train personnel in matters relating to neuropsychiatric disorders, and (4) to develop and assist states in the use of the most effective methods of prevention, diagnosis and treatment of neuropsychiatric disorders. A National Advisory Mental Health Council will be created to function with the Surgeon General of the Public Health Service, consisting of the Surgeon General, as chairman, and six members appointed by him with the approval of the Federal Security Administrator.

The Surgeon General will be authorized, through the institute, (1) to conduct and foster researches and experiments relating to the cause, prevention and methods of diagnosis and treatment of neuropsychiatric disorders; (2) to promote the coordination of researches conducted by the institute and similar researches conducted by other agencies; (3) to make available research facilities of the service to appropriate public authorities and scientists; (4) to make grants-in-aid to universities, hospitals, laboratories and other public or private institutions, and to individuals for such research projects as are recommended by the National Advisory Mental Health Council; (5) to admit voluntary patients at the institute to be established for the purpose of study; (6) to provide for the dissemination of information obtained as a result of the research carried on relating to neuropsychiatric disorders; (7) to establish fellowships in the institute; (8) to provide for training and instruction in matters relating to neuropsychiatric disorders, and (9) to assist states, counties, health districts and other political subdivisions of the states and nonprofit agencies in establishing and maintaining adequate measures for the prevention, treatment and control of such disorders.

The National Advisory Mental Health Council will be authorized (1) to review research projects or programs submitted to or initiated by it, (2) to assemble information concerning studies being carried on in the United States or any other country with respect to neuropsychiatric disorders and (3) to review applications for grants-in-aid and to certify to the Surgeon General its approval.

An appropriation of $4,500,000 is to be authorized for the erection and equipment of suitable and adequate hospital buildings and facilities. An additional appropriation of $10,000,000 for the fiscal year ending June 30, 1946 will be authorized to enable the Surgeon General to carry out the general objectives of the legislation. Thereafter for each fiscal year there will be authorized a sum sufficient to carry out its purposes.

Hearings were scheduled on the House bill, September 18, by a subcommittee of the House Committee on Interstate and Foreign Commerce.

A resolution was presented from the Section on Nervous and Mental Diseases at the New York, 1940, session endorsing the general objectives of legislation setting up a "Central Neuropsychiatric Institute to be established in the Public Health Service to carry on research in nervous and mental diseases" and advocating that such an institute have at its disposal funds to be allotted to competent groups throughout the country approved by a National Neuropsychiatric Advisory Council. At the time this resolution was presented to the House, no legislation was pending in the Congress relating to this matter. The House refused to adopt the resolution.

Hospital Construction Act.—Pending legislation contemplates the enactment of a Hospital Construction Act. The Senate bill, S. 191, was introduced by Senator Hill, Alabama, for himself and Senator Burton, Ohio, and is pending in the Senate Committee on Education and Labor. Four companion House bills are pending in the House Committee on Interstate and Foreign Commerce: H. R. 2498, introduced by Representative Neely, West Virginia, H. R. 2755, introduced by Representative Patrick, Alabama, H. R. 3561, introduced by Representative Priest, Tennessee, and H. R. 3845, introduced by Representative Snyder, Pennsylvania.

The broad objectives of this legislation have been approved by the Board of Trustees. It contemplates for the first year of its operation a total federal appropriation of $110,000,000 earmarked as follows: $5,000,000 to assist states to inventory existing hospitals, to survey the need and to develop a program for new construction, $5,000,000 to assist state agencies to meet their administrative expenses in carrying out state plans, and $100,000,000 for the construction of public and other nonprofit hospitals. Thereafter so much will be appropriated as the Congress may deem necessary. The term "hospital" is defined by this legislation to include "public health centers and general, tuberculosis, mental, chronic disease and other types of hospitals and related facilities, such as laboratories, outpatient departments, nurses' home and training facilities, and central service facilities operating in connection with hospitals, but shall not include any hospital furnishing primarily domiciliary care." A "public health center" is defined to mean "a publicly owned facility for the provision of public health services and medical care, including related facilities such as laboratories, clinics and administrative offices in connection with public health centers." On a federal level this hospital building program will be under the direction and supervision of the Surgeon General of the United States Public Health Service aided by a Federal Advisory Council, all appointed members of which will be appointed by the Administrator of the Federal Security Agency. The Surgeon General will serve as chairman ex officio of the council. On a local level, a state agency must be designated in plans submitted for approval as the administrative agency.

Hearings on the Senate bill were conducted by the Senate Committee on Education and Labor, Feb. 26, 27 and 28 and March 12, 13 and 14, 1945. Representatives of the Association participated in these hearings and recorded the approval of the Association to the general principles of the legislation. No further action has been taken by the Senate committee. As this report is being prepared, hearings have been scheduled on the legislation by the House Committee on Interstate, and Foreign Commerce and a representative of the Association will participate in those hearings too.

Since this legislation contemplates state action to designate agencies on a state level to administer the program, to make the surveys of existing facilities and to formulate plans for the construction of additional facilities during the 1945 legislative season, the following twenty states enacted legislation anticipatory of the passage of the federal law: Alabama, Delaware, Florida, Georgia, Illinois, Indiana, Maine, Maryland, Montana, New Mexico, Oklahoma, Oregon, Rhode Island, South Dakota, Texas, Utah, Vermont, Virginia, Washington and West Virginia. In the main, state departments of health in these states were designated as the state agency to function under the federal law.

An analysis of the provisions of the proposed federal law was prepared by the Bureau and published in THE JOURNAL for Jan. 27, 1945. Reprints are available.

Federal Licensure of Physicians.—A bill has been introduced in the House of Representatives by Representative Eberharter, Pennsylvania, relating to physicians and dentists who have served in the land or naval forces during the war period, H. R. 2969. It is pending in the House Committee on Military Affairs. This bill proposes that any individual who served as an officer in the Medical Department of the Army or Navy during the war period and was discharged or separated from service under honorable conditions and who, prior to such discharge or separation, held a license to practice medicine or dentistry under the laws of a state shall be entitled to receive a certificate which will authorize him to engage, in any state, in the practice of the particular class of medicine or dentistry covered by the state license held by him. It is contemplated that the Secretary of War and the Secretary of the Navy shall jointly prescribe regulations with respect to the making of application for, and the issuance of, such certificates, which will be issued to the medical or dental officer at the time of his discharge or separation from service. No action has been taken by the Congress on this bill, and it is doubtful that it can be constitutionally enacted. The theory of the bill, apparently, is that the certificates to be issued will legalize the practice of medicine or dentistry by the holder in any state without compliance with the requirements of laws of that state imposing requirements to be met by those desiring to engage in practice. To that extent the legislation would constitute a usurpation of authority by the federal government that the Supreme Court has said lodges with the individual states. That court has held that the direct control of medical practice in the states is beyond the power of the federal government (*Linder* v. *United States,* 268 U. S. 5). A similar conclusion has been reached by a United States District Court (*Starnes* v. *Rose,* 282 Fed. 336).

The Wagner-Murray-Dingell Bill.—The 1945 version of this legislation was introduced in the Senate by Senator Wagner, New York, and Senator Murray, Montana, as S. 1050 and in the House of Representatives by Representative Dingell, Michigan, as H. R. 3293. The bills are pending, respectively, in the Senate Committee on Finance and the House Committee on Ways and Means, the same committees to which similar bills in the Seventy-Eighth Congress were referred. No hearings have as yet been scheduled.

The text of the pending legislation contains 185 pages, 95 more pages than its predecessor. In broad outline it embraces the following: A new title will be added to the Public Health Service Act for grants and loans for hospitals and health center construction. This title corresponds, with significant exceptions, to the provisions of the Hill-Burton hospital construction bill. It removes some of the safeguards that are contained in the latter bill, particularly in reference to the functions of the Federal Advisory Council, and proposes a ten year building program for which $950,000,000 is to be authorized. The pending legislation provides for grants and services to develop more effective measures for venereal disease and tuberculosis control and for the expansion and improvement of public health work. It proposes grants for maternal and child health services, for services for crippled children and for child welfare services. It would make available grants to states for public assistance to needy individuals, including medical care for such individuals. The most important section from the point of view of medicine, section 9, proposes to amend title II of the Social Security Act to provide a national social insurance system. The amended title would provide for (*a*) a compulsory system of sickness insurance, (*b*) a national system of unemployment and temporary disability insurance, including cash benefits for disability from sickness which causes unemployment, (*c*) retirement, survivor and extended disability benefits, (*d*) a national social insurance trust fund, (*e*) credit for military service, (*f*) extended coverage to include an estimated additional 15,000,000 persons, (*g*) contributions or taxes by employers, employees and the self employed and (*h*) certain general provisions to apply to the operation of the title.

The national social insurance system will be financed in general from a trust fund established by a 4 per cent employer and a 4 per cent employee tax on wages and salaries up to the first $3,600 a year paid or received after Dec. 31, 1945. The tax to be levied on the self employed will be 5 per cent of the market value of services subject to the same ceiling limitation. The taxes to be paid by states and localities and by their employees will be 2.5 per cent of the first $3,600. The taxes that employers and employees will pay to finance the system will be distributed as follows:

Division of Taxes

Program	Employer	Employee	Total
1. Retirement, survivors and extended disability insurance	1.0%	1.0%	2.0%
2. Medical care and hospitalization insurance	1.5%	1.5%	3.0%
3. Unemployment insurance	1.0%	1.0%	2.0%
4. Temporary disability insurance	0.5%	0.5%	1.0%
Total taxes	4.0%	4.0%	8.0%

The bill itself does not specifically undertake to make medical care available to the indigent class. It does provide that benefits may be extended to noninsured persons on behalf of whom equitable payments are made or assured by public agencies of the United States, the several states, or any of them or their political subdivisions. On behalf of the legislation, it is claimed that its enactment will not necessarily result in the displacement of existing prepayment medical service and hospitalization plans. The legislation does not refer to such plans *eo nomine* but does direct the Surgeon General, after consultation with the Advisory Council as to questions of general policy and administration and with the approval of the Federal Security Administrator, to make agreements or arrangements with private agencies or institutions, or with private persons or groups of persons, to utilize their services and facilities.

A detailed analysis of the part of the legislation proposing to engraft on the social security program a system of compulsory sickness insurance was prepared by the Bureau and published in THE JOURNAL, June 2, 1945. Reprints are available. Whether or not hearings will be scheduled on this legislation, either by the Senate or by the House committee, remains, at the time of this report, a matter for conjecture. Consideration must be given to the possibility of developments along three avenues. The House of Representatives has authorized its Committee on Ways and Means to expend not in excess of $50,000 in a study of the entire social security setup. This study will embrace, it is contemplated, the need for the amendment and expansion of the Social Security Act, with particular reference to old age and survivors' insurance and the problems of coverage, benefits and taxes. It is understood that public hearings will be held by the committee in the course of its investigation, and it is entirely possible that during the course of such hearings some of the proposals contained in the Wagner-Murray-Dingell bill will receive consideration. It has been suggested, too, that proponents of the pending legislation, realizing the difficulty that the passage of the omnibus bill faces, will make an effort to accomplish their purpose by obtaining the enactment of separate bills to accomplish the overall objectives of S. 1050. The third development that must be considered has relation to what the President will recommend to the Congress as intimated in his message of September 6. In this message he said, in part:

> I shall shortly recommend a national health program to provide adequate medical care for all Americans and to protect them from financial loss and hardships resulting from illness and accident. I shall also communicate with the Congress with respect to expanding our social security system and improving our program of education for our citizens.

He called attention to the fact that the Congress has been considering legislation with respect to the construction of hospitals and health centers throughout the country and said that the federal government must continue to recognize its obligation to maintain and improve the health of the nation by providing federal grants where necessary for the construction of hospitals and health centers. He repeated President Roosevelt's suggestion for an economic bill of rights, which included the right to adequate medical care and the opportunity to achieve and enjoy good health.

If the President does submit a concrete program to the Congress, that program will without doubt have considerable influence on the prospects of action on the Wagner-Murray-Dingell bill.

Maternal and Child Welfare Act of 1945.—Pending legislation proposes a greatly expanded federal program for the health and welfare of mothers, infants and children and for services to crippled children. In the Senate a bill, S. 1318, was introduced by Senator Pepper and nine other members of the Senate Committee on Education and Labor, to which committee it was referred. Similar bills have been introduced in the House by Representative Norton, New Jersey (H. R. 3922), by Representative Kelley, Pennsylvania (H. R. 3994), and by Representative Patterson, California (H. R. 4059). They are pending in the House Committee on Labor, of which Representative Norton is chairman.

Senator Pepper has described the genesis of this legislation in this manner:

> In administering the program of services for children under the Social Security Act, the Children's Bureau has sought the advice and counsel of outstanding physicians, social workers and members of other professions who are authorities in the fields of child health and child welfare, and of citizen groups concerned with the problems of children. For the past year the Bureau's technical and general advisory committees have been reviewing and reappraising the programs in relation to present needs. Their recommendations, in turn, have been studied by the National Commission on Children in Wartime. [Note: This commission was appointed by the chief of the Children's Bureau and was formerly known as the Children's Bureau Commission on Children in Wartime.] Members of this commission include the chairmen of the bureau's advisory committee and representatives of labor, farm, women's, church and professional groups.
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> The present bill embodies the essential recommendations of this distinguished group of citizens, which has released a report entitled "Building the Future for Children and Youth."

A detailed analysis of the provisions of this legislation was prepared by the Bureau and published in THE JOURNAL for Aug. 11, 1945. Reprints are available.

For the fiscal year ending June 30, 1946 an appropriation of $100,000,000 is contemplated. Of this, $50,000,000 is earmarked for maternal and child health services, $25,000,000 for services to crippled children, $20,000,000 for child welfare services and $5,000,000 for administrative expenses of the Children's Bureau. In essence, the legislation would extend and greatly expand the EMIC program. It would make available to mothers and children medical care irrespective of financial needs. A "child" in contemplation of the legislation is any person under 21 years of age. All plans for the programs proposed must be approved by the Children's Bureau, and the chief of that bureau will formulate all general policies with respect to maternal and child health services and services for crippled children after consultation with a conference of health officers and an advisory committee to be appointed by her.

Senator Pepper has described this legislation as constituting a modest beginning and intimates that an annual appropriation of $1,000,000,000 will be required adequately to provide the necessary services for children.

Additional Funds for EMIC Program.—Prior to the termination of the fiscal year ended June 30, 1945 the Congress appropriated a supplemental sum in the amount of $2,200,000 to finance the program during the remainder of that fiscal year. In the regular appropriation bill for the fiscal year ending June 30, 1946 the sum of $44,189,500 was made available. A new proviso was added to the language under which the Children's Bureau is forbidden to promulgate or carry out any regulation relating to the care of obstetric cases which discriminates between persons licensed under state law to practice obstetrics. This new proviso declares that any state plan which provides standards for professional obstetric services in accordance with the laws of the state shall be approved by the chief of the Children's Bureau.

Reorganization of Government Agencies; Federal Department of Health and Welfare.—Legislation is pending looking toward a reorganization of government agencies, S. 1120, introduced by Senator Overton, Louisiana, for Senator McCarran, Nevada. It is pending in the Senate Committee on the Judiciary, and public hearings are under way. No new department of the federal government could be created under this legislation, but it authorizes the President to examine and formulate plans for the reorganization of all agencies of the government for the purpose, among others, of coordinating, grouping and consolidating agencies and functions of the government, as nearly as may be, according to major purposes. Any plan that is formulated by the President must be submitted to the Congress for approval. A similar reorganization measure was enacted by the Seventy-Sixth Congress in 1939, and the present bill proposes to extend the authority conferred on the President by that law. The enactment of the reorganization measure now pending was recommended by the President in his message to the Congress on May 24, 1945.

No action has been taken by the Congress on the Miller bill to establish a Federal Department of Health, H. R. 1391. It is pending in the House Committee on Expenditures in the Executive Departments. It would establish at the seat of government an executive department to be known as the Department of National Health, "at the head of which shall be the Secretary of National Health, who shall be appointed by the President, by and with the advice and consent of the Senate, and shall receive the same salary as the heads of other executive departments." There will be assembled in the new department, the bill proposes, all activities of the federal government relating to health.

Rumor persists that efforts will soon be made to create either a Department of Welfare or a Department of Health and Welfare in the federal government. A recent report of the Woman's Foundation recommends such action by the Congress and suggests that there be created in the department four divisions, one each for health, education, welfare and social insurance, and recreation.

Medical Care for Recipients of Public Assistance.—Representative Coffee, Washington, has reintroduced his bill to provide medical care for recipients of public assistance, H. R. 1820. It is pending in the House Committee on Ways and Means. It proposes for the first year of its operation an appropriation of $18,000,000 for allotments to states that have developed plans approved by the Social Security Board. Thereafter, so much as is necessary will be authorized. The term "medical care" is defined to include such services, supplies and appliances for the diagnosis, cure, mitigation, treatment or prevention of disease, or for the purpose of "affecting any structure or function of the body," as may be approved by the Social Security Board.

Medical care will be provided, it is contemplated, (1) by the state agency administering or supervising the administration of the plan or (2) by other agencies of the state or political subdivision, in accordance with agreements authorized in regulations by the Social Security Board. Medical care might be provided directly by the state or other agency or indirectly through payments by the state or other agency to the person or persons furnishing the care.

A somewhat different approach to this problem is suggested in a bill introduced by Congressman Miller, Nebraska, H. R. 1442. It also is pending in the House Committee on Ways and Means and would authorize federal grants to the states to provide medical, surgical and hospital care to beneficiaries of old age assistance either through the purchase of insurance or through administration of a plan by or under the supervision of a state agency. It specifically requires that a state plan must "provide for cooperation with medical, health, nursing and welfare groups and organizations."

As indicative of the number of persons who might qualify for medical care under this legislation, attention is called to the fact that in June 1944 more than 2,000,000 needy old people were receiving old age assistance, about one fifth of the total aged population. During the same period approximately 261,000 families were receiving aid in behalf of some 653,000 children, and assistance payments went to nearly 74,000 needy blind persons.

G. I. Bill of Rights.—A considerable number of bills are pending to clarify and liberalize the provisions of the Servicemen's Readjustment Act of 1944. Action has been taken on only one of these bills, H. R. 3749, introduced by the chairman

of the House Committee on World War Veterans' Legislation, Representative Rankin, Mississippi. It has passed the House and is now pending in the Senate Committee on Finance. In addition to liberalizing the loan provisions of the existing law, this bill would effect certain changes in the provisions relating to the education of veterans. It would provide that courses may be initiated four years after the date of discharge of the veteran or the termination of the war and that no course could extend beyond nine years after the termination of the war; it would provide for short intensive postgraduate or vocational training courses of less than thirty weeks; it would authorize correspondence courses of education or training and would increase the subsistence allowance of a veteran undergoing training or pursuing a course of education from $50 to $60 a month, if the veteran is without dependents, and from $75 to $85 a month if the veteran has dependents.

A Senate bill, S. 1176, introduced by Senator Pepper, Florida, would amend existing law (1) to make benefits available regardless of whether or not education was impeded, delayed, interrupted or interfered with by reason of entry into service; (2) to remove the requirement that the educational course must be initiated not later than two years after discharge or termination of the war; (3) to remove the distinction between veterans over 25 years at the time of induction and those under this age; (4) to add special provisions for qualifying veterans who wish to complete preprofessional and professional courses of education, extending the maximum benefit to seven years regardless of length of service, and (5) to increase the monetary dependency benefits to veterans obtaining education. This bill is pending in the Senate Committee on Finance.

Under the original law a veteran is permitted to pursue a course of education in a school that has been certified to the Veterans Administration by an appropriate state agency as being qualified to give adequate courses of instruction. In a number of instances, state agencies have certified to the Veterans Administration that designated sectarian schools of the healing art, osteopathic, chiropractic and naturopathic, are so qualified. The effect of this certification is that at government expense veterans will be offered courses in such limited branches of the healing art. The Committee on Postwar Medical Service has taken cognizance of this situation and has urged the governors of the several states to take all due precautions to assure that no school of the healing art is certified to the Veterans Administration which is not fully qualified to give adequate and scientific instruction.

Aid to the Physically Handicapped.—The Seventy-Eighth Congress directed the House Committee on Labor, or a subcommittee thereof, to study the extent and character of aid given to the physically handicapped. A special committee was created to make the study, of which Representative Kelley of Pennsylvania was made chairman. In making the study a series of hearings has been scheduled, in some of which representatives of the Association have participated. The evidence submitted at these hearings has been published in eight parts. It relates to the aid given to the blind, to victims of poliomyelitis, to the deaf and hard of hearing, to those having orthopedic impairments, to other handicapping conditions and to the extent to which federal aid is now available to the handicapped. Further hearings are in progress at which particular attention is being given to questions related to amputations and the problems faced by amputees.

The resolution under which the Kelley subcommittee functions contemplates that recommendations for legislation will be submitted as the result of the study. It may be anticipated, therefore, that such recommendations may be submitted to the Seventy-Ninth Congress.

Health Programs for Government Employees.—Bills are pending in the Senate and House proposing to provide for health programs for government employees, S. 406, introduced by Senator Downey, California, and H. R. 2716, introduced by Representative Randolph, West Virginia. These bills are identical with the exception that the Senate bill contains a provision under which osteopaths would be permitted to participate in such programs. It is contemplated that any program to be developed under this legislation would be limited to (1) treatment of minor illnesses except in an emergency or injury or illness sustained while in the performance of the employee's duty in accordance with the United States Employees' Compensation Act, (2) preemployment and other examinations, (3) referral of employees to private physicians and dentists and (4) education and preventive programs relating to health, including the alleviation of health hazards in the working environment. The House version of this legislation has been favorably reported by the House Committee on the Civil Service.

Penicillin.—Legislation was introduced to amend the Federal Food, Drug and Cosmetic Act by providing for the certification of batches of drugs composed wholly or partly of any kind of penicillin or any of its derivatives, H. R. 3266, introduced by Representative Lea, California. This bill has passed the House and Senate and was approved by the President, July 6, 1945, as Public Law No. 139. The language of it is similar to that of a law previously enacted by the Congress safeguarding the purity of insulin.

Dangerous Drugs.—Representative Robertson, Virginia, introduced H. R. 2348, a bill to provide for the coverage of certain drugs under the federal narcotic laws. It passed the House and subsequently the Senate in an amended form. The Senate amendments have not as yet been accepted by the House. In the language of the House Committee on Ways and Means, the purpose of this legislation is to provide a prompt and convenient method for bringing under the control of the federal narcotic laws any newly discovered synthetic drug which is determined, after appropriate inquiry, to possess the same or similar dangerous, habit forming or habit sustaining qualities as morphine or cocaine.

Vivisection.—There has been reintroduced in the House of Representatives a bill to prohibit experiments on living dogs in the District of Columbia, H. R. 491, introduced by Representative Lemke, North Dakota. This bill provides that it shall be a misdemeanor for any person to experiment or operate in any manner whatsoever on any living dog in the District of Columbia for any purpose other than the healing or curing of the dog. It is pending in the House Committee on the District of Columbia.

Chiropractors and the United States Employees' Compensation Act.—Bills are pending to permit chiropractors to treat beneficiaries of the United States Employees' Compensation Act, S. 178, introduced by Senator Murdock, Utah, and H. R. 610, introduced by Representative Tolan, California. The bills are pending, respectively, in the Senate Committee on Education and Labor and in the House Committee on the Judiciary. A subcommittee of the Senate Committee scheduled a hearing on this legislation at which representatives of the Association appeared in opposition. No committee action has followed.

Optometry and Podiatry Corps in the Army Medical Department.—Pending legislation, H. R. 3755, introduced by Representative Short, Missouri, proposes to establish an Optometry Corps in the Medical Department of the United States Army. The bill was referred to the House Committee on Military Affairs. Following a favorable report by that committee, the bill was passed by the House. Another bill, H. R. 1998, introduced by Representative Hoch, Pennsylvania, contemplates the establishment of a Chiropody Corps in the Medical Corps of the Army. This bill was referred to the House Committee on Military Affairs, and no action has been taken on it up to the time of preparation of this report.

Benefits for Railroad Employees.—Legislation is pending to increase materially the benefits now available to railroad employees under the Railroad Retirement Acts and the Railroad Unemployment Insurance Act. The Senate bill, S. 293, was introduced by Senator Wagner, New York, for himself and Senator Wheeler, Montana. It is pending in the Senate Committee on Interstate Commerce. No action has been taken on it. The House bills were introduced by Representative Jennings, Tennessee (H. R. 1102) and by Representative Crosser, Ohio (H. R. 1362) and are pending in the House Committee on Interstate and Foreign Commerce. Extended hearings on the House bills have been in progress.

In addition to providing cash benefits for periods of unemployment generally, this legislation specifically provides for cash benefits for periods of sickness resulting in unemployment and cash benefits for antepartum and postpartum maternity periods. It would authorize the federal administrative agency to enter into agreements or arrangements with physicians, hospitals, clinics or other persons for securing the examination, physical, medical, mental or otherwise, of persons claiming, entitled to or receiving sickness or maternity benefits and the performance of services or the use of facilities in connection with the execution of statements of sickness which must be filed by employees to obtain benefits. Similar legislation was introduced in the Seventy-Eighth Congress and was referred by the Board of Trustees to the Council on Medical Service and Public Relations for study and attention. The pendency of the present bills has been called to the attention of the Washington office of the Council.

Extension of Social Security Program.—Numerous bills are pending proposing to extend and expand the social security program, other than legislation previously referred to in this report. It seems unlikely, however, that any action will be taken on them pending the outcome of the investigations that have been authorized to determine whether or not the program should be expanded. Reference will be made here to only one additional bill, S. 1188, introduced by Senator Green, Rhode Island, and pending in the Senate Committee on Finance. This bill is patterned after the legislation originally introduced in the Seventy-Seventh Congress by Representative Eliot and reintroduced in the Seventy-Eighth Congress by Senator Green. The previous legislation was analyzed by the Bureau in THE JOURNAL, Sept. 26, 1942. The present bill, as did its predecessors, provides disability and hospitalization benefits for employees and in addition would authorize the Social Security Board to provide for the furnishing of medical, surgical, institutional, rehabilitation or other services to individuals entitled to disability benefits if such services will aid in enabling such individuals to return to gainful work.

Dental Health Programs.—Three bills are pending to provide assistance to states in developing and maintaining dental health programs: S. 1099, introduced by Senator Aiken, Vermont, for himself and Senator Pepper, Florida, H. R. 3412, introduced by Representative Brehm, Ohio, and H. R. 3414, introduced by Representative Traynor, Delaware. The Senate bill is pending in the Committee on Education and Labor and the House bills in the House Committee on Interstate and Foreign Commerce. Another bill, also pending in the Senate Committee on Education and Labor, is S. 190, introduced by Senator Murray, Montana, to provide for, foster and aid in coordinating research relating to dental diseases and conditions and to establish the National Institute of Dental Research in the National Institute of Health of the United States Public Health Service. Hearings have been concluded on the two Senate bills. This legislation is sponsored by the American Dental Association.

Federal Programs to Promote Scientific Research.—Under date of July 5, 1945 the director of the Office of Scientific Research and Development, Dr. Vannevar Bush, submitted to President Truman a report outlining a suggested federal program to promote scientific research and education. This report set forth five principles as basic to any such program:

1. Whatever the extent of support may be, there must be stability of funds over a period of years so that long range programs may be undertaken.

2. The agency to administer such funds should be composed of citizens selected only on the basis of their interest in and capacity to promote the work of the agency. They should be persons of broad interest in and understanding of the peculiarities of scientific research and education.

3. The agency should promote research through contracts or grants to organizations outside the federal government. It should not operate any laboratories of its own.

4. Support of basic research in the public and private colleges, universities and research institutes must leave the internal control of policy, personnel and the method and scope of the research to the institutions themselves.

5. While assuring complete independence and freedom for the nature, scope and methodology of research carried on in the institutions receiving public funds, and while retaining discretion in the allocation of funds among such institutions, the federal agency must be responsible to the President and to the Congress.

The report recommended the broad outline of a bill for the enactment of Congress, including the suggested creation of a National Research Foundation. This foundation, the report suggested, should develop and promote a national policy for scientific research and scientific education, should support basic research in nonprofit organizations, should develop scientific talent in American youth by means of scholarships and fellowships, and should by contract and otherwise support long range research on military matters. Identical bills are pending in the Senate and the House of Representatives to implement the recommendations of the report. The Senate bill, S. 1285, was introduced by Senator Magnuson of Washington and is pending in the Senate Committee on Commerce. The House bills, H. R. 3852, introduced by Representative Mills, Arkansas, and H. R. 3860, introduced by Representative Randolph, West Virginia, are pending in the House Committee on Interstate and Foreign Commerce.

Subsequent to the introduction of these three bills, Senator Kilgore, West Virginia, for himself and Senator Johnson, Colorado, and Senator Pepper, Florida, introduced S. 1297 relating also to scientific research. This bill embodies principles which the Subcommittee on War Mobilization of the Senate Military Affairs Committee, on the basis of extensive studies made over the past two years, has set up as desirable in any legislation designed to meet the postwar scientific needs of the nation. It is pending in the Senate Committee on Military Affairs.

Other bills relating to scientific research are pending. Representative May, Kentucky, introduced H. R. 3440, which has passed the House and is pending in the Senate Committee on Naval Affairs. Senator Byrd, Virginia, has introduced S. 825, which is pending in the Senate with a favorable committee report. Senator Fulbright, Arkansas, has introduced S. 1248, which is pending in the Senate Committee on Commerce.

An analysis of all the pending bills relating to scientific research was prepared by the Bureau and published in THE JOURNAL, Aug. 11, 1945. Reprints are available. With the exception of the three bills designed to implement the recommendations contained in the Bush report, the pending bills differ in many details, and that fact was given recognition by Senator Kilgore at the time he introduced his bill. After referring to the other pending legislation, he expressed the hope that arrangements could be made for joint hearings "so that the issues presented by these different bills can be clarified and agreement reached at an early date on the scope of research needed in the interest of national security and also on the details of organization and administration so essential to the success of any national program of scientific research." Present indications are that joint or consolidated hearings will be scheduled for the month of October.

The Board of Trustees has given preliminary consideration to this legislation, and it has been referred to the Committee on Postwar Medical Care for detailed study. That committee has appointed a subcommittee to make the study, and a report by that subcommittee will shortly be made to the full committee.

Additional interest was undoubtedly stimulated in legislation to promote scientific research by the President's reference to the subject in his message to Congress, Sept. 6, 1945. He recommended the establishment of a single federal research agency which would discharge the following functions: (1) promote and support fundamental research and development projects in all matters relating to the defense and security of the nation, (2) promote and support research in the basic sciences and in the social sciences, (3) promote and support research in medicine, public health and allied fields, (4) provide financial assistance in the form of scholarships and grants for

young men and women of proved scientific ability, (5) coordinate and control diverse scientific activities now conducted by the several departments and agencies of the federal government and (6) make fully, freely and publicly available to commerce, industry, agriculture and academic institutions the fruits of research financed by federal funds. These recommendations parallel those contained in the Bush report.

Deferment of Premedical Students.—At the 1944, Chicago, session the attention of the House was called to the then recent action of Selective Service in relation to the deferment of premedical students. A resolution was adopted declaring it to be imperative that immediate action be taken by the President or the Congress to correct the drastic regulations resulting in a restriction in the number of students qualified to enter the courses of medical instruction in approved medical schools. Efforts to obtain a correction of the situation through administrative action proved fruitless and, early this year legislation was introduced by Senator Ellender, Louisiana, S. 637, proposing to authorize the release of persons from active military service, and the deferment of persons from military service in order to aid in making possible the education and training of physicians and dentists to meet essential needs. The bill was referred to the Senate Committee on Military Affairs, and a hearing was scheduled on it May 1. Representatives of the Association appeared in support of the bill, reflecting the position taken by the House at the 1944 session. No further action has been taken on this bill, and it is still pending in committee.

After progress of the legislation had been held up in the Senate, as the result of opposition of the War and Navy Departments and Selective Service, Representative Judd, Minnesota, sponsored a companion bill in the House, H. R. 3350, which was referred to the House Committee on Military Affairs. No action has been taken on the House bill.

Subsequently Senator Downey, California, introduced a resolution in the Senate, S. Res. 134, directing the Committee on Military Affairs to make a complete investigation with respect to the relative needs of the armed forces and the civilian population for the services of medical personnel with a view to ascertaining (1) whether, as a result of developments in the war, or through more efficient utilization of medical personnel, such personnel could be released from the armed forces for civilian service without impairment of the war effort, (2) the speed with which demobilization of medical personnel in the armed forces could be accomplished as the needs of the armed forces diminish and (3) whether any further action was necessary to insure an adequate supply of trained medical personnel to meet the future needs of the armed forces and the civilian population. The Senate Committee on Military Affairs has been exploring the subject further, but, at the date this report is being prepared, no definite procedures have been recommended by the committee to alleviate the situation.

Veterans' Legislation.—With the objective in view of improving the quality of medical care available to veterans, several pending bills propose a reorganization of medical services in the Veterans Administration. No action has been taken on any of them, S. 1079, introduced by Senator Johnson, Colorado, and H. R. 3310, introduced by Representative Rankin, Mississippi, propose to establish a Department or Bureau of Medicine and Surgery in the Veterans Administration. They are pending, respectively, in the Senate Committee on Finance and in the House Committee on World War Veterans' Legislation. H. R. 2253, introduced by Representative Priest, Tennessee, proposes to establish in the Veterans Administration a commissioned service consisting of physicians, surgeons, dietitians, nurses and medical technicians. A bill introduced by Representative Rogers, Massachusetts, H. R. 3317, proposes to establish a Bureau of Medicine and Surgery in the Veterans Administration. Both of the two last mentioned bills are pending in the House Committee on World War Veterans' Legislation.

The House of Representatives has passed a resolution, H. Res. 192, authorizing the Committee on World War Veterans' Legislation, acting as a whole or by subcommittee, to conduct an investigation of the Veterans Administration with a particular view to determining the efficiency of the administration and operation of Veterans Administration facilities. This investigation has been under way, and a report outlining the results of the investigation is expected to be filed shortly.

Another bill, S. 1187, introduced by Senator White, Maine, for Senator Shipstead, Minnesota, would authorize the appointment of an advisory committee of prominent members of the medical and related professions to advise the President with respect to the formulation of programs to provide medical care and hospitalization for veterans. No action has been taken on this bill. It is pending in the Senate Committee on Finance. A House bill, H. R. 3463, introduced by Representative Voorhis, California, proposes the creation of a National Veterans' Hospital Board with the following duties (*a*) to advise the Administrator of Veterans' Affairs on all matters pertaining to the hospital or outpatient care of veterans and concerning the appointment of a national executive director for all veterans' hospitals; (*b*) to conduct a complete survey of all veterans' hospitals and to recommend to the Administrator and the National Executive Director such changes in personnel, such hospital construction and such other action as may be necessary; (*c*) to consult with the Administrator and the Director on the appointment of chief medical officers for all veterans' hospital units in the United States; (*d*) to provide adequate arrangements and facilities for continuous research on improved methods in the fields of medicine, psychiatry and all other types of care required by veterans, and (*e*) to prepare a schedule of salaries, grades and classifications for all types of employees, professional or otherwise, in veterans' hospitals with a view to obtaining competent and qualified personnel. This bill is pending in the House Committee on World War Veterans' Legislation.

Two bills propose a general liberalization and clarification of the veterans law pertaining to hospital treatment, medical care, domiciliary care and related services, S. 1203, introduced by Senator Johnson, Colorado, and H. R. 3522, introduced by Representative Rankin, Mississippi. They are pending, respectively, in the Senate Committee on Finance and the House Committee on World War Veterans' Legislation.

Several bills are pending which would eliminate the financial inability of the veterans to defray expenses of hospital treatment or domiciliary care for nonservice disabilities as a condition precedent to obtaning such treatment or care in a veterans' facility. These bills would do away with what is customarily referred to as a "paupers' oath." As examples of bills of this character are H. R. 1923, introduced by Representative Morrison, Louisiana, H. R. 3332, introduced by Representative Barry, New York, and H. R. 599, introduced by Representative Springer, Indiana.

A bill introduced by Representative Miller, Nebraska, H. R. 3254, would authorize the furnishing of medical and hospital treatment to certain veterans in private facilities. This would be accomplished by defining the term "Veterans Administration facility" as used in the existing law to include any private facility for which the Administrator of Veterans' Affairs may deem it necessary to contract in order to provide medical and hospital treatment (1) in emergency cases; (2) for veterans of any war, in any case in which neither a facility under the exclusive jurisdiction of the Veterans Administration nor a government facility utilized by the Veterans Administration is within a reasonable distance of the place of residence of the veteran; (3) for women veterans of any war, and (4) for veterans of any war in the territories and possessions. A similar bill has been introduced by Representative Sikes, Florida, H. R. 3630. Both are pending in the House Committee on World War Veterans' Legislation. Representative Rogers, Florida, has introduced H. R. 3594, authorizing the Administrator of Veterans' Affairs to reimburse any accredited hospital for hospitalization and treatment, for a period not exceeding ten days, of a veteran of any war, not dishonorably discharged, on certification that the care was of an emergency character and that delay would jeopardize the health or life of the veteran. It is pending in the House Committee on World War Veterans' Legislation.

Three other bills propose to facilitate the receipt of hospital treatment and domiciliary care by former members of the armed forces at institutions nearest their places of residence: S. 755, introduced by Senator Cordon, Oregon, and pending in the Senate Committee on Finance, H. R. 2989, introduced by Representative Huber, Ohio, and H. R. 2921, introduced by Representative Stigler, Oklahoma, both pending in the House Committee on World War Veterans' Legislation.

Another bill, H. R. 1120, introduced by Representative Murdock, Arizona, proposes that for pension purposes any person who served under contract with the War Department as acting assistant or contract surgeon between April 21, 1898 and Feb. 2, 1901 shall be considered to have been in the active military service of the United States for the period of such contract service between those dates.

Pepper Subcommittee on Wartime Health and Education.—This subcommittee of the Senate Committee on Education and Labor is authorized by a Senate resolution to investigate the distribution and utilization of medical personnel, facilities and related health activities and the deficiencies in health and education among persons otherwise fit to be employed to the best advantage in agriculture, industry and other activities so as consistently with the spirit of American insitutions and the national emergency best to promote the war and victory. The hearings scheduled so far by the subcommittee have been printed in seven parts. Parts 1 and 4 relate to juvenile delinquency, part 2 to the availability of medical services at Pascagoula, Miss., part 3 to the white collar and fixed income groups in the war economy, parts 5 and 6 to Selective Service rejections, medical care in the armed forces and for veterans, and to the availability of medical services and facilities for the civilian population, and part 7 to medical research.

Four interim reports have been submitted to the Senate: Report 1 concerns the white collar and fixed income groups, report 2 juvenile delinquency, report 3 Selective Service statistics and the availability and distribution of medical services and facilities, and report 4 health needs of veterans. Report 3 was published in full in THE JOURNAL Jan. 6, 1945 and reprints are available. In this report, after outlining some of the testimony developed at the hearings, the subcommittee included eight recommendations based on its preliminary findings: (1) that federal grants-in-aid to states be authorized for the construction of hospitals, medical centers and health centers, in accordance with integrated state plans approved by the United States Public Health Service; (2) that federal loans and grants be made available to assist in postwar provision of urban sewerage and water facilities, rural sanitation and water facilities, and milk pasteurization plants, in communities or areas where such facilities are lacking or inadequate; (3) that state and local governments be urged to establish full time local public health departments in all communities as soon as the needed personnel become available and that the federal government should increase the amount of its grants to state health departments to the end that complete geographic coverage by full time local health departments may be achieved and that state and local public health programs may be expanded in accordance with needs; (4) that the Army consider the feasibility and advisability of expanding its program for induction and rehabilitation of men rejected because of physical and mental defects; (5) that the medical records of the Selective Service system be preserved and that funds be appropriated for further processing and study of these records; (6) that attention be given to the shortage of personnel with training in psychology and psychiatry and that immediate steps be taken to increase the output of such personnel with a view to providing child guidance and mental hygiene clinics on a wider scale; (7) that federal scholarships or loans be made available to assist qualified students desiring medical and dental education and that increased enrolment of women in medical and dental schools, and premedical and predental courses, be encouraged in every way possible, and (8) that federal funds be made available to states for medical care of all recipients of public assistance and that allotment formulas governing distribution of federal funds to state public assistance programs be made more flexible in order to give more aid to states where needs are greatest.

In the opinion of the committee, a comprehensive health and medical facilities program would pay big dividends in improved national health and physical fitness.

Miscellaneous.—Four bills have been introduced by Representative Price, Florida, proposing, respectively, to establish a United States Military Medical School, a United States Naval Medical School, a United States Navy Training School for Nurses and a United States Army Training School for Nurses, H. R. 3927, H. R. 3924, H. R. 3923 and H. R. 3926. The naval bills are pending in the House Committee on Naval Affairs, the army bills in the House Committee on Military Affairs. Another bill, H. R. 713, introduced by Representative Dickstein, New York, provides that there shall be created in each corps area of the United States a medical training school for the instruction of physicians for the armed forces and the United States Public Health Service. This bill is pending in the House Committee on Military Affairs.

S. J. Res. 89, introduced by Senator Pepper, Florida, for himself and Senator Wagner, New York, Senator Murray, Montana, Senator Capper, Kansas, Senator Ball, Minnesota, and Senator Smith, New Jersey, suggests the convening of an International Health Organization and authorizes the President to take immediate steps toward that end. It is pending in the Senate Committee on Education and Labor.

A bill introduced by Senator Langer, North Dakota, S. 800, proposes to establish a National Infantile Paralysis Clinic at Minneapolis and to appropriate $20,000,000 for its establishment, maintenance and operation. Another bill, introduced by Representative Stevenson, Wisconsin, contemplates an appropriation of $500,000,000 to be expended under the direction of the Surgeon General of the United States Public Health Service for research with respect to the cause and cure of cancer and poliomyelitis. It is pending in the House Committee on Interstate and Foreign Commerce.

Two bills propose to establish a United States Commission for the Promotion of Physical Fitness, H. R. 2044, introduced by Representative Weiss, Pennsylvania, and H. R. 2045, introduced by Representative Hartley, New Jersey. Both are pending in the House Committee on Education.

A pending bill, H. R. 1688, introduced by Representative Davis, Tennessee, would authorize the appointment of x-ray technicians as commissioned officers in the Medical Corps of the Army and Navy. Another bill, H. R. 3147, introduced, by request, by Representative Adams, New Hampshire, would authorize the appointment of qualified medical technologists as commissioned officers in the Army of the United States and in the Naval Reserve.

(To be continued)

Coming Medical Meetings

American Medical Association House of Delegates, Chicago, Dec. 3-6. Dr. Olin West, 535 N. Dearborn St., Chicago 10, Secretary.

American Academy of Allergy, Chicago, Dec. 10-11. Dr. Karl D. Figley, 316 Michigan St., Toledo 2, Ohio.

American Association on Mental Deficiency, Cleveland, Nov. 28-Dec. 1. Dr. Neil A. Dayton, Box 51, Mansfield Depot, Conn., Secretary.

American Ophthalmological Society, Hot Springs, Va., Nov. 12-14. Dr. Walter S. Atkinson, 129 Clinton St., Watertown, N. Y., Secretary.

American Society of Anesthetists, New York, Dec. 12-13. Dr. McKinnie L. Phelps, 745 Fifth Ave., New York 22, Secretary.

American Society of Tropical Medicine, Cincinnati, Nov. 12-15. Dr. Joseph S. D'Antoni, Tulane Ave., New Orleans 13, Secretary.

Central Society for Clinical Research, Chicago, Nov. 2-3. Dr. Carl G. Harford, 602 S. Euclid Ave., St. Louis 10, Secretary.

Indiana State Medical Association, French Lick, Nov. 6-8. Mr. Thomas A. Hendricks, 23 E. Ohio St., Indianapolis 4, Secretary.

North Pacific Pediatric Society, Portland, Ore., Dec. 1. Dr. Aldis B. Johnson, Cobb Bldg., Seattle 1, Washington, Secretary.

Puerto Rico, Medical Association of, San Juan, Dec. 14-16. Dr. Rafael A. Vilar, P. O. Box 3866, Santurce, Secretary.

Southern Medical Association, Cincinnati, Nov. 12-15. Mr. C. P. Loranz, Empire Bldg., Birmingham 3, Alabama, Secretary.

Southern Surgical Association, Hot Springs, Va., Dec. 4-6. Dr. Alfred Blalock, Johns Hopkins Hospital, Baltimore 5, Secretary.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION AND PUBLIC HEALTH.)

CALIFORNIA

Considerations Governing Location of Physicians in California.—With the approval of the Council of the California Medical Association, the state chairman for the physicians Procurement and Assignment Service, Dr. Harold A. Fletcher, San Francisco, has sent to the chairmen of all county committees on Procurement and Assignment Service and to the secretaries of all county medical societies a proposal for aiding resumption of private practice by physicians who were formerly in California. The policies have been developed on the assumption that every physician in California who served in the military forces deserves protection and help in becoming reestablished in his former location. It assumes further that, "until these men have had an opportunity to return to their former locations, every effort should be made to keep new physicians from locating in those places where their presence might seriously disturb the rehabilitation of the physician not yet released."

The proposal states that:

The state chairman of Procurement and Assignment Service still has the responsibility of classifying physicians as essential or nonessential on the advice obtained from his county committees and other sources. The Procurement and Assignment Service has no authority to tell a physician that he can or cannot or must or must not locate anywhere. However, during the emergency almost all county societies voluntarily passed regulations that, during the emergency, no new physician would be considered eligible to membership in the county society unless he was classified as essential by the Procurement and Assignment Service, as the Procurement and Assignment Service was and is the only agency authorized to so classify physicians as essential or nonessential. The county medical societies are now rightfully taking the stand that the emergency will not be over until there is more or less complete demobilization and there is a more or less complete return of physicians to their former location. These societies are therefore rightfully continuing to consider a physician ineligible who moves into a new location in which he is not classified as essential by Procurement and Assignment Service. This is of greatest importance, as you all know of the forecast of the intended location of thousands of physicians in California who previously practiced in other states.

The following policies should be followed, giving careful consideration to the merits of each case and making these policies flexible and commensurate with the actual needs of the various counties or areas and towns in the counties. The needs of the various locations in the county for medical care should be based temporarily on present needs, assuming that a high percentage of physicians still in the service will have been returned. If there is still a need for more physicians on this basis, room should be made for new physicians, and they should be classified essential if they choose to locate.

1. Physicians returning to former locations are immediately to be considered essential.

2. New physicians coming from previous locations in other states are not to be considered essential except under the necessities of the community as outlined.

3. Physicians formerly practicing in another location in another county in California temporarily must be considered as nonessential to almost the same degree as a physician coming from out of the state. Such physicians should be advised to return to their former locations until the end of the emergency.

4. The group of young physicians who have never practiced anywhere before but who entered the military forces at the end of or during their postgraduate training deserves the greatest care and consideration and help. In many cases these physicians would normally have entered practice in the towns or localities where they lived during their premedical educational years; however, this is naturally very often not the case. Whenever it can be shown that such physicians would normally have located in a particular area on the completion of their education, because of family, social or medical contacts or other reasonably legitimately valid reasons they should be classified as essential and be given every help and consideration in establishing themselves. These young physicians will not in any sense interfere to any great extent with the return to practice of the older men. Exception to this statement may be lack of office space; and, when possible, these young physicians should be taken into association with older men in order to conserve office space. This group as a whole must be considered as the normal replacement of losses from the medical profession, aside from the temporary loss of physicians to the military forces. Preference should naturally be given to young physicians who have lived and been educated in California in their premedical years, regardless of whether they studied medicine in the state or out of the state. However, too much emphasis cannot be given to the importance of helping this group of veterans of this war in becoming established.

It is hoped that county chairmen, as well as secretaries of county societies, will interview personally as many of these returning veterans as possible. A personal interview, frankly stating the aforementioned policies, in almost 100 per cent of the cases will prove that the policies are fair and just, and the physician seeking location will be satisfied that he has been given fair treatment and will express the hope that his own State Procurement and Assignment Service and medical societies are doing as much for their returning veterans as is being done in California. Futhermore, it should be clearly stated that these policies are only for the immediate future and will be abandoned on the termination of the emergency.

GEORGIA

Ninety Years of Age.—Dr. Eugene Rollin Corson, Savannah, recently observed his ninetieth birthday. Dr. Corson graduated at Hahnemann Medical College and Hospital of Philadelphia in 1877.

New Professor of Pediatrics.—Dr. Philip A. Mulherin, Augusta, has been appointed professor and chairman of the department of pediatrics at the University of Georgia School of Medicine, Augusta. He will succeed the late Dr. Claude M. Burpee.

IDAHO

Hospital Under Department of Public Health.—At the request of Governor Charles C. Gossett, Boise, the Idaho Department of Public Health has taken temporary control of the State Hospital, South, at Blackfoot. Dr. Lynn J. Lull, Boise, medical consultant of the state health department, will be acting medical superintendent in place of Dr. George R. Smith, Boise, former director. These changes result from recent investigation by a committee appointed by Governor Gossett following charges of mismanagement against this institution. The governor has stated that, if any criminal offenses have been committed in connection with the management of the institution, the matter will be turned over to the grand jury.

ILLINOIS

Communicable Diseases Control Regulations Revised.—The rules and regulations of the Illinois department of public health for the control of communicable diseases have been revised and made effective as of September 1. The current revision consists in the main of a deletion of obsolete material and an application of those principles of communicable disease control which have been shown by experience to be effective. Favus, pellagra and lymphocytic choriomeningitis were dropped from the list of reportable diseases, while food infections (salmonellosis), toxoplasmosis, meningococcemia, ringworm of the scalp and virus pneumonia were added. Scarlet fever and all other hemolytic streptococcus infections of the upper respiratory tract are now grouped together and subjected to some control measures. A distinction is now made between food infections and food poisoning. The former term refers to those cases of gastroenteritis caused by salmonella and related organisms, while the latter refers to botulinus and staphylococcic food poisonings. The duration of quarantine in scarlet fever and poliomyelitis has been reduced from 21 days to 14 days. Household contacts to cases of meningitis and scarlet fever, may, with permission of the local health authority, be removed from the premises to remain away for the duration of the isolation period and no further restrictions are placed upon their activities. Important changes have been made in the regulations for the control of tuberculosis. It is now required that all open cases of this disease be hospitalized whenever sanatorium facilities are available at public expense. Patients who refuse hospitalization or who leave a sanatorium against medical advice are required to be quarantined. Whenever sanatorium facilities are not available at public expense, the patient must be isolated at home. Considerable revision has been made in the rules governing the conduct of funerals when death has occurred from a communicable disease. Sealed caskets are not required unless the death was from smallpox, cholera, psittacosis or plague. Public funerals may be held regardless of the cause of death, provided only that the funeral is not held from premises wherein are residing contacts who are required to be quarantined. Private services, however, may be held in such instances.

Chicago

Phi Rho Sigma Scholarship Awards.—On October 2 the first Phi Rho Sigma awards were presented at the founders' day convocation of Northwestern University Medical School. The presentation was made by Dr. Howard B. Carroll, president of the medical division, Northwestern University Alumni Association, and president of the Alpha Association of Phi Rho Sigma fraternity. The first award, consisting of $100 and a certificate, given to the student who has maintained the highest scholastic average during his first three years at Northwestern University Medical School, went to Mr. Edward V. Johnston. The second award, consisting of a framed certificate, offered to the national medical fraternity at the medical school having thirty or more active members enrolled as regular students which has maintained the highest scholastic average during the preceding year, was given to Phi Delta Epsilon. The third award, consisting of $50 and a certificate given to the man in the winning fraternity who has been chosen by his fraternity as the student to have contributed most toward winning the

award, was presented to Mr. Nelson Lionel Portnoy, who was selected by Phi Delta Epsilon. The awards were established last year to stimulate scholarship in the medical school among the organization groups as well as among the individual students (THE JOURNAL, Nov. 18, 1944, p. 779). They were established by Dr. George James Dennis, who wished during his lifetime to remain anonymous as a donor. In accordance with the wish of Dr. Dennis, a tablet executed by Miss Mary M. Webster, sculptress, has been placed in the Archibald Church Library as a reminder of the objective of the awards.

INDIANA

State Medical Meeting.—The ninety-sixth annual session of the Indiana State Medical Association will be held at French Lick, November 6-8, under the presidency of Dr. Neslen K. Forster, Hammond. Included among the speakers will be:

Dr. John Ralston Lindsay, Chicago, Ménière's Syndrome.
Lieut. Col. Truman G. Blocker Jr., M. C., Problems of Maxillofacial Surgery, World War II.
Dr. Loring T. Swaim, Boston, Arthritis.

There will be a panel discussion on "The Disabled, the Physician and Employment" with Dr. Carl M. Peterson, Chicago, Secretary, Council on Industrial Health, American Medical Association, Chicago, as the moderator; participants will include:

J. R. Crawley, director, vocational rehabilitation, Indianapolis.
Dr. Earl H. Hare, chief medical officer, Veterans Administration Facility, Indianapolis.
Dr. Harley L. Krieger, medical director, Ford Motor Company, Detroit.
Dr. Harold A. Vonachen, medical director, Caterpillar Tractor Company, Peoria, Ill.
Dr. Eli S. Jones, Hammond.
Dr. Creighton Barker, executive secretary, Connecticut State Medical Society, New Haven.

A war participation luncheon will be addressed by Major Gen. George F. Lull, deputy surgeon general, Washington, D. C., on "Repercussions" and Watson B. Miller, federal security administrator, Washington, "The Medical Profession Today and Tomorrow." The annual banquet will be addressed, among others, by Ralph E. Gates, governor of Indiana, on "Public Health in Indiana." The woman's auxiliary to the state medical association will hold its meeting, November 6-7.

KENTUCKY

State Medical Meeting in Lexington.—The ninety-fifth annual meeting of the Kentucky State Medical Association, designated the D. Newton Porter Memorial, will be held at the Phoenix Hotel, Lexington, October 29-31, under the presidency of Dr. Oscar O. Miller, Louisville. Among the out of state speakers will be:

Dr. Vilray P. Blair, St. Louis, Fundamentals of Plastic Surgery.
Col. Howard Rusk, M. C., Washington, D. C., Rehabilitation: a Medical Challenge.
Major William McDaniel Ewing, M. C., Recent Trends in Orthopedic Surgery.
Major Emory L. Shiflett, M. C., X-Ray Diagnosis in Reconstruction Surgery of the Wounded Abdomen.

The oration in medicine will be delivered by Dr. David G. Miller Jr., Morgantown, on "The Future of the Rural Practitioner" and the oration in surgery by Dr. Richard T. Hudson, Louisville, on "Backache." At a public meeting Tuesday evening, October 30, Dr. J. Watts Stovall, Grayson, will deliver the President's Address on "The Country Doctor, Past and Present." Other speakers will be Dr. Morris Fishbein, Editor of THE JOURNAL, "Medicine in the Postwar World"; Dr. Andrew S. Brunk, Detroit, "Prepayment Medical Service," and Mr. Thomas A. Hendricks, Secretary of the Council on Medical Service and Public Relations, American Medical Association, on activities of the council.

MASSACHUSETTS

Stephen Rushmore Retired as Dean of Middlesex.—Dr. Stephen Rushmore was recently retired as dean of Middlesex University School of Medicine, Waltham. The action was taken by vote of the trustees of the university and was worded to take effect immediately, according to the *New England Journal of Medicine* September 27. Dr. Rushmore will devote himself to the practice of obstetrics and gynecology.

Prize Subscription Goes to Tufts Student.—The annual prize subscription offered by the *New England Journal of Medicine* for the best undergraduate contribution to the *Tufts Medical Journal* has been awarded to Eugene G. LaForet for his paper on "Medical Aspects of Submarine Warfare," which appeared in the March 1945 issue. The paper "Myasthenia Gravis: A Complete Review," by Albert M. Starr and Banice M. Webber received honorable mention; it appeared in the January 1945 issue. According to custom, these students will be given a two year and a one year subscription to the *New England Journal of Medicine*, respectively.

MINNESOTA

Dr. Ridgway Said to Be State's Oldest Practicing Physician.—Dr. Alfred M. Ridgway, Annandale, is credited by *Minnesota Medicine* with being the oldest practicing physician in the state both in age and in term of service. Dr. Ridgway was born in 1862, graduated at the University of Minnesota Medical School, Minneapolis, in 1890 and has been practicing fifty-five years. *Minnesota Medicine* said that Dr. Ridgway not only keeps regular office hours but takes night calls.

Dr. Pearce Named Tuberculosis Control Officer.—Dr. Naboth O. Pearce, Minneapolis, has been appointed tuberculosis control officer in the Minnesota Department of Health to direct a statewide tuberculosis program. The work, which will be financed by a federal grant of $100,000, will be supplemental to activities now carried on by Dr. Walter J. Marcley, Minneapolis, in the division of preventable diseases, by the local health departments and the Christmas Seal organizations. The objective of the program is to discover incipient cases of tuberculosis.

MISSISSIPPI

Twenty-Five Years as Health Director.—Dr. Rosier D. Dedwylder, Cleveland, recently completed twenty-five years of service as director of the Bolivar County health department, with headquarters in Cleveland. Dr. Dedwylder gave up his private practice in 1912 to work with the state board of health and the Rockefeller Foundation in a study of hookworm in the south. He subsequently carried out investigation of malaria and malaria control. On July 1, 1920, Cleveland was selected for the first full time health department in the state and one of the first in the South and Dr. Dedwylder was named health director.

MISSOURI

John Auer Lecture.—Dr. Walter C. Alvarez, Rochester, Minn., delivered the second annual John Auer Lecture at the St. Louis University auditorium, October 10, on "Helpful Hints for the Understanding of Puzzling Pains." The lectureship is an annual function of St. Louis University School of Medicine and is sponsored by Lambda chapter of Phi Beta Pi medical fraternity. It was instituted in July 1944 in honor of Dr. John Auer, professor of pharmacology at St. Louis University.

Gross Prize Goes to Robert Elman.—The Philadelphia Academy of Surgery announces that the Samuel D. Gross prize for 1945 in the amount of $1,500 has been awarded to Dr. Robert Elman, St. Louis, for his essay entitled "Parenteral Alimentation in Surgery with Special Reference to Protein and Amino Acids." Others who submitted essays may arrange for their return, if desired, by communicating with Dr. Calvin M. Smyth Jr., Methodist Hospital, Broad and Wolf streets, Philadelphia 48.

NEW JERSEY

Personal.—Dr. Joseph P. Holt, Louisville, associate professor of physiology at the University of Louisville School of Medicine, has been appointed director of research in the medical department of the Standard Oil Company, New Jersey, according to *Science*, September 28.——Edward A. Stiles, secretary of the National Rehabilitation Association, who was director of vocational rehabilitation in Vermont for nearly eight years, has been appointed program director of the state rehabilitation commission. Mr. Stiles succeeds Joseph Spitz, who resigned recently.

Remington Medal Goes to Pharmaceutical Chemist.—Joseph Rosin, pharmaceutical chemist of Plainfield, has been announced as the recipient of the 1945 Remington medal of the New York Branch of the American Pharmaceutical Association. In naming Mr. Rosin to receive the medal, the committee on award cited his work as "foremost American authority on chemical reagents" and stated that the Pharmacopeia and National Formulary, the two official books of standards for medicines in this country, "are today more indebted to Mr. Rosin for the excellent quality of their chemical standards than to any other person."

ALASKA

Members of Alaska Board of Health.—Four residents of Alaska, one from each judicial division, were Dr. Dwight L. Cramer, Ketchikan; George Preston Sr., Fairbanks; Mrs. Katherine Kehoe, Nome, and Rev. Rolland Armstrong, Anchorage.

GENERAL

Report of Infantile Paralysis Foundation.—The annual report for the year ended May 31, 1945 covering the activities of the National Foundation for Infantile Paralysis has recently been released. The report, among other things, discusses the disbursements of the foundation to embrace research projects to various institutions.

Sociologic Foundations of the Psychiatric Disorders of Childhood.—The Twelfth Institute on the Exceptional Child of the Child Research Clinic of the Woods Schools, Langhorne, Pa., November 2, will be devoted to the theme "Sociological Foundations of the Psychiatric Disorders of Childhood." The institute will be held at the Amphitheatre, Duke University, Durham, N. C., in collaboration with the Duke University School of Medicine.

New Periodical on Obstetrics and Gynecology.—Dr. Emil Novak and Dr. Nicholson J. Eastman, Baltimore, the editors, announce the publication of a new abstract periodical, *Obstetrical and Gynecological Survey*. It will cover the entire medical periodical literature, both foreign and domestic, and will appear bimonthly beginning in February 1946. Nine hundred pages per year will be published and the subscription price will be $9. The Williams and Wilkins Company, Baltimore, will be the publishers.

Association for the Advancement of Science.—The American Association for the Advancement of Science will hold a meeting in St. Louis, March 27-30. This will be the first peacetime and really full-scale meeting of the association since the Philadelphia meeting in December 1940. It is expected that researches that have been accumulating during five years of war will now be made generally public. The advances in laboratory equipment and supplies and new books on science will be presented at a science exhibit.

Journal Changes Hands.—The *Nervous Child* has been bought by its founder and editor in chief, Ernest Harms, from its previous owner, Grune & Stratton Medical Publishers of New York. The *Nervous Child* will be produced from now on by a new publishing house, Child Care Publications, New York, which has been created for this purpose. The same publishing house will start to issue during 1946 another periodical entitled the *Journal of Child Psychiatry*, devoted to unsolicited contributions in the field of mental disease in children.

Hospital Commission Stimulates Survey Action.—There are now twenty states and the District of Columbia which have under way surveys of their hospital facilities as a result of activities of the Commission on Hospital Care, a nongovernment public service committee to study hospital surveys in the United States, it was announced October 8. Surveys are now in progress in Washington, Idaho, Montana, Wyoming, North Dakota, Minnesota, Iowa, Kansas, Oklahoma, Wisconsin, Illinois, Michigan, Indiana, Tennessee, Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, New Jersey and the District of Columbia. Surveys have not yet started but have been officially authorized in Oregon, New Mexico, Arkansas, Florida, North Carolina, Virginia, West Virginia, Delaware and New York, and surveys are being planned in California, Nevada, Arizona, Colorado, South Dakota, Nebraska, Texas, Missouri, Louisiana, Mississippi, Ohio, Pennsylvania, Kentucky, South Carolina and Connecticut. Surveys have been completed in Utah, Alabama, Georgia and Maryland.

Palestine to Have Medical School.—The Hebrew University and Hadassah, the Women's Zionist Organization of America, will build a nonsectarian medical school on Mount Scopus in Jerusalem. It is planned to raise four million dollars in a two year countrywide campaign to begin immediately. Campaign headquarters have been opened at 16 East 48th Street, New York. The goal of the financial drive will not only meet the cost of construction, equipment and five year maintenance of the school, which will be known as the Hebrew University-Hadassah Medical School, but will provide an additional 100 beds in the Rothschild-Hadassah Hospital, a part of the Hadassah-University Medical Center. The increase will bring the total bed strength of the hospital to 400. Dr. Jonas S. Friedenwald, associate professor of ophthalmology, Johns Hopkins University School of Medicine, Baltimore, is chairman of a Hadassah sponsored American committee on medical education. The plans call for the construction of three main buildings, with provision for future expansion, and the use for certain departments of the existing Nathan Ratnoff Building, which now houses the postgraduate medical school of the university. In addition, the present departments and laboratories of the university and medical center, many of which will be enlarged, will become a part of the proposed school. The new buildings will be erected a short distance from the university and close to the medical center and will be of an architectural design harmonious with the modern style of the group of medical center structures. It is hoped soon to appoint an administrative officer of the medical school and give him the opportunity to study administrative methods in selected medical schools in the United States and England.

Prevalence of Poliomyelitis.—Reports of cases of poliomyelitis for the week ended October 20 have been received from the division of public health methods, U. S. Public Health Service, as follows:

	Oct. 20, 1945	Oct. 21, 1944
New England		
Maine	2	0
New Hampshire	1	2
Vermont	2	4
Massachusetts	27	32
Rhode Island	0	1
Connecticut	16	12
Middle Atlantic		
New York	66	259
New Jersey	43	26
Pennsylvania	37	48
East North Central		
Ohio	23	49
Indiana	19	7
Illinois	42	19
Michigan	14	23
Wisconsin	52	15
West North Central		
Minnesota	14	26
Iowa	18	13
Missouri	17	13
North Dakota	0	0
South Dakota	0	0
Nebraska	5	3
Kansas	14	1
South Atlantic		
Delaware	0	3
Maryland	8	19
Dist. of Columbia	4	9
Virginia	9	28
West Virginia	3	15
North Carolina	11	20
South Carolina	3	1
Georgia	10	6
Florida	9	1
East South Central		
Kentucky	3	11
Tennessee	17	2
Alabama	3	0
Mississippi	4	1
West South Central		
Arkansas	3	1
Louisiana	10	3
Oklahoma	11	2
Texas	18	3
Mountain		
Montana	7	1
Idaho	1	2
Wyoming	0	0
Colorado	3	0
New Mexico	0	3
Arizona	1	2
Utah	5	0
Nevada	0	0
Pacific		
Washington	15	10
Oregon	1	11
California	46	15
Total	617	722
First 42 weeks:		
1945 and 1944	11,462	16,856
Median, 1940-1944	7,949	

FOREIGN

Work Continues on Paderewski Memorial.—The Paderewski Memorial Hospital, located at the University of Edinburgh, Scotland, will continue attached to the university for another year, according to the *Polish Review*, August 23. The hospital was organized at the University of Edinburgh by the Polish School of Medicine and has cared for 62,392 outpatients and 30,000 inpatients since its founding in 1941. There are twenty-three professors and lecturers and twenty-four doctors attached to the Polish Medical Center in Edinburgh. Dr. Anthony T. A. Jurasz is director of the hospital. Credit for the start of a library at the hospital is given to Mrs. Herbert M. Woollen, Indianapolis, head of the Indiana section of the Paderewski Testimonial Fund. The national group set up a committee which has been active in collecting and financing the purchase of books for the library. The hospital was named for Ignace Jan Paderewski, who was active in the welfare of his people. On his death in June 1941 national feeling indicated that the best memorial to his memory would be a much needed hospital for Polish forces stationed in the British Isles outside of Edinburgh. The hospital, made possible by donations from the Paderewski Testimonial Fund, was opened Oct. 17, 1941 (THE JOURNAL, Jan. 3, 1942, p. 61).

CORRECTION

"Air Embolism Following Insufflation During Pregnancy."—In the article by Herbert S. Breyfogle (THE JOURNAL, September 29) appears a statement to the effect that the manufacturer of silver picrate does not publish a warning against the danger of insufflation of air through the vagina in pregnancy. Mr. Ambrose Hunsberger Jr., representative for Wyeth, Inc., points out that all of the literature issued by that company does contain such warnings.

Foreign Letters

LONDON

(From Our Regular Correspondent)

Sept. 22, 1945.

Postgraduate Surgical Teaching at the Royal College of Surgeons

The Royal College of Surgeons maintains a library, museum and laboratories for the use of medical graduates from all parts of the world. These facilities are available to fellows and members of the college by right, but they have also been made open, on suitable introduction, to medical graduates who are not members or fellows. They are also open to undergraduates, and a large number of students have used the library during the war, though unfortunately the museum specimens were not available because of the danger of bombing. It is hoped that they will soon be on exhibition again. The college also arranges short courses of lectures on the contents of the museum—the Arnott Demonstrations of Anatomy by Professor Cave and the Erasmus Wilson Demonstrations in Pathology by pathologists and surgeons appointed each year. In addition, the Arris and Gale and the Hunterian lectures provide opportunities for the presentation of original work in anatomy, physiology, pathology and surgery.

In recent years the professors of the college have given an increasing number of lectures, and it has now been arranged that two regular courses shall be given each year on anatomy, pathology and applied physiology by Professors Wood Jones, A. J. E. Cave, John Beattie and R. A. Willis. These courses will deal with the subjects of the primary examination for the fellowship. They are not designed to provide complete and comprehensive instruction in these subjects but to deal with such fundamental aspects as will be selected from time to time. They must not be regarded as classes specially arranged for the examination but are so planned as to be helpful to candidates and also to surgeons by dealing with recent advances in these subjects and their practical application. At present these courses are open to all medical graduates without fees, but later fees may be charged to those who are not members or fellows of the college.

Another innovation is the decision of the council to provide instruction in surgery by courses of lectures designed to assist those engaged in specialist work and those who are preparing for the final examination for the fellowship of the college. These lectures will be free to fellows and members of the college, but others will be required to pay a small fee. The college also awards prizes for meritorious work as well as many fellowships for those who desire to engage in practical work in the museum and laboratories.

Better Health Provisions for Miners

Addressing the South Wales miners' leaders, Mr. Shinwell, minister of fuel and power, said that he was determined that the health of miners should be better safeguarded. His parliamentary secretary would devote special attention to health and safety measures. He had heard from the miners' leaders that young men fought shy of the pits because of the incidence of industrial disease, particularly silicosis, from which 5,810 miners had been certified as suffering during the war. There would have to be more provision for rehabilitating disabled men, including training for other occupations, so that young men would be assured that they would not become unemployable if they incurred any disease. He intended to see that no miner who might be disabled as the result of his work was cast on the scrap heap but that he was trained for other useful employment.

PARIS

(From Our Regular Correspondent)

Sept. 26, 1945.

The Responsibility of the Physician

For the first time the Paris court of appeals has delivered a verdict concerning the physician's responsibility in a blood transfusion case. A physician (the director of a blood transfusion center) who attended a patient with a gastric ulcer was obliged to administer a transfusion of 350 cc. of blood, which was given by one of the regular blood donors assigned to his center. On the same day the blood donor was submitted to the periodic examination, which in this particular center takes place twice every quarter instead of once as officially prescribed. The examination showed a positive Bordet Wassermann reaction, known on the day after the transfusion. Another clinical examination, which followed at once, disclosed the existence of a syphilitic chancre on the blood donor's person.

The arguments of the law court were as follows: Taking into consideration that under the present state of science it is impossible for the physician to be absolutely sure that the donors' blood is pure because syphilis involves a period of incubation, called the "silent period," and taking into consideration that the contract between the patient and the physician obliges the latter to give his patient scrupulous care in accordance with the state of knowledge of science, that Dr. X is still less to be excused for not having taken . . . the necessary precautions, since his patient has expressed his fear of being infected; also that an authoritative section of the medical profession insists on a closer checking of blood donors. Since the customary methods of control are quite insufficient to guarantee the safety of the patient, the physician is fined 200,000 francs.

Miscellaneous

A congress of the French Association for Progress of Sciences will take place October 20 to 26 in Paris for the first time since 1940. Papers will be read on the avitaminoses in deportees' camps by Charles Richet, on the amazing bacillary variability and its significance from the point of view of general biology by Bovin, Institut Pasteur member of the Académie de médecine, and on radiology in France from 1940 to 1945 by Lacassagne of the College de France.

The ninth French congress of gynecology will be held on October 6, 7 and 8, at which uterine fibromas will be discussed.

Marriages

Oliver Haltom Graves, Jackson, Tenn., to Miss Bettie Frances Gray of Stamford, Texas, at Carlisle Barracks, Pa., August 11.

Walter Gamewell Watson, Trenton, S. C., to Miss Aurrey Lynette Baxemore of Swainsboro in Silver Run, Md., August 29.

Preston Calvin Stringfield Jr., Dallas, Texas, to Miss Billie Waugh Johnson of North Wilkesboro, N. C., September 15.

Verlynne Vincent Volin, Lennox, S. D., to Miss Susanne Cronin of Windsor, Ont., Canada, in Detroit, September 8.

Charles Tear Fried, Long Island City, N. Y., to Dr. Ethel Lieberman of Edmonton, Alta., Canada, recently.

James Carrington Francis, Anniston, Ala., to Miss Virginia Lee Eskridge of Birmingham, July 22.

Harold D. Waltz, Sandusky, Ohio, to First Lieut. Marie Mayse in Reims, France, August 11.

Lincoln Godfrey Jr., Merion, Pa., to Miss Patricia Agnes Geyelin in St. Davids, September 1.

Carl N. Gessler, McMinnville, Tenn., to Miss Margaret North of Nashville, September 18.

Edward Scott Goodwin, Albany, N. Y., to Mrs. Caroline Peltz Kerr of Selkirk, August 4.

Deaths

Robert **Levy** ✠ Denver; Bellevue Hospital Medical College, New York, 1884; born in Hamilton, Ont., Canada, May 30, 1864; professor of otolaryngology emeritus at the University of Colorado School of Medicine; at various times on the faculty and secretary of the Gross Medical College and the Denver and Gross College of Medicine; chairman of the Section on Laryngology, Otology and Rhinology of the American Medical Association, 1912-1913; past president of the Colorado State Medical Society, Denver County Medical Society and the American Laryngological, Rhinological and Otological Society; member of the American Academy of Ophthalmology and Otolaryngology and the American Laryngological Association; fellow of the American College of Surgeons; one of the founders and three times president of the Denver Clinical and Pathological Society, becoming president emeritus; served as a major in the medical corps of the U. S. Army during World War I; major, Officers Medical Reserve Corps, April 1919; specialist certified by the American Board of Otolaryngology; otolaryngologist to the Colorado General Hospital, St. Joseph's Hospital, Denver General Hospital, St. Luke's Hospital and Children's Hospital; otolaryngologist to the National Jewish Hospital, where he had been a member and chairman of the medical advisory board for many years; on April 4, 1934, in recognition of his completion of fifty years in the practice of medicine, his oil portrait was presented to the Medical Society of the City and County of Denver; died July 1, aged 81, of cerebral hemorrhage.

Alexander **A. Conrad** ✠ Crete, Neb.; John A. Creighton Medical College, Omaha, 1915; born at Crete on April 6, 1890; secretary and past president of the Saline County Medical Society; past vice president of the Nebraska State Medical Association; past president of the Seventh Councilor District of the state medical association, serving as councilor for that district; secretary of the board of education for many years and member at the time of his death; for twenty-six years city physician; served as chairman of the Procurement and Assignment Service for the state, as a member of the Saline County insanitary board, local surgeon for the Burlington Railroad and for many years physician for Doane College; on the associate staffs of the Bryan Memorial Hospital, St. Elizabeth Hospital and the Lincoln General Hospital, Lincoln, where he died July 9, aged 55, of carcinoma of the pancreas.

James **Alexander Waddell** ✠ Charlottesville, Va.; University of Virginia Department of Medicine, Charlottesville, 1911; professor of pharmacology, materia medica and toxicology at his alma mater, where he had been secretary of the faculty of medicine from 1915 to 1943, premedical adviser from 1918 to 1924 and chairman of the committee on admissions from 1920 to 1930; secretary of the Charlottesville-University-Albemarle Board of Health from 1923 to 1930; high school principal, 1901-1902; affiliated with the blind department of the Virginia School for Deaf and Blind from 1902 to 1907; epidemiologist, State Department of Health during the summer in 1909 and from 1912 to 1915; member of the Virginia Academy of Toxicology, American Association for the Advancement of Science and the Society for Pharmacology and Experimental Therapeutics; died June 8, aged 67.

G. Graham **Watts,** San Antonio, Texas; Rheinische Friedrich-Wilhelms-Universität Medizinische Fakultät, Bonn, Prussia, Germany, 1881; honorary member of the State Medical Association of Texas; member of the American Medical Association; served as an ambulance driver in the Franco-Prussian War in 1870 and as an assistant surgeon at Fort Sam Houston during the Spanish-American War; during World War I served in the surgeon's office at Fort Sam Houston; affiliated with the Santa Rosa Infirmary and the Medical and Surgical Hospital; had a part in the establishment in 1895 of the San Antonio Infirmary and in 1903 of the Physicians and Surgeons Hospital, where he died July 11, aged 92, of uremia and generalized arteriosclerosis.

Gilbert **Leslie Gosslee,** Moorhead, Minn.; Minneapolis College of Physicians and Surgeons, medical department of Hamline University, 1903; a captain in the medical corps of the U. S. Army during World War I; for ten years resident director of the State Teachers College; eighth councilor district representative on the state procurement and assignment board; county health officer; served as city health officer; on the staff of St. John's Hospital, Fargo, N. D., where he died July 15, aged 68, of cerebral hemorrhage and myocardial degeneration.

William P. Addison, Shreveport, La.; Memphis (Tenn.) Hospital Medical College, 1899; died July 16, aged 73, of coronary occlusion.

Annie Mary Slate Anderson, Los Gatos, Calif.; M.B., University of London Faculty of Medicine, London, England, in 1892 and M.D. in 1894; died May 28, aged 78.

Charles Edward Anderson, Los Angeles; University of the South Medical Department, Sewanee, Tenn., 1900; died July 11, aged 69, of coronary occlusion.

William Lamar Atkins ✠ Shreveport, La.; University of Louisville (Ky.) School of Medicine, 1916; fellow of the American College of Surgeons; on the staffs of the Shreveport Charity Hospital and the T. E. Schumpert Memorial and North Louisiana sanitariums; died June 16, aged 52, of coronary occlusion.

Horace James Beel, Grand Rapids, Mich.; University of Buffalo School of Medicine, 1909; past president of the Kent County Medical Society; served overseas during World War I; formerly senior attending surgeon at the Butterworth Hospital and visiting surgeon at the Blodgett Memorial and St. Mary's hospitals; died July 14, aged 58, of cerebral hemorrhage and hypertensive heart disease.

Chester Bradley Bliss ✠ Sandusky, Ohio; University of Michigan Department of Medicine and Surgery, Ann Arbor, 1896; fellow of the American College of Surgeons; past president of the Ohio Public Health Association; served as president of the staff at the Good Samaritan Hospital; died July 10, aged 71, of myocarditis.

William Charles Brandon, Garfield, Wash.; Vanderbilt University School of Medicine, Nashville, Tenn., 1892; University of Nashville (Tenn.) Medical Department, 1902; served during the Spanish-American War and World War I; died in Colfax, July 4, aged 78, of carcinoma of the bladder.

Hymie Henry Brenner, Minneapolis; University of Wisconsin Medical School, Minneapolis, 1943; an intern at the Mount Sinai Hospital in Cleveland; served a residency at the Minneapolis General Hospital; drowned at Detroit Lakes, July 5, aged 35, when his boat capsized.

Beaumont Brown, Sacramento, Calif.; College of Physicians and Surgeons of San Francisco, 1904; for many years on the staff of the Washoe County General Hospital in Reno, Nev.; died July 2, aged 68, of myocarditis due to arteriosclerosis.

Francis Aloysius Campana, Union City, N. J.; Fordham University School of Medicine, New York, 1918; died in St. Francis Hospital, Jersey City, July 6, aged 49, of chronic glomerulonephritis.

William Patrick Cannon, Somonauk, Ill.; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1905; served overseas during World War I; district surgeon for the Illinois Central Railroad; died in St. Mary's Hospital, Kankakee, August 6, aged 64.

Covert Ballejo Cooper, Arlington, Texas; Medical Department of Tulane University of Louisiana, New Orleans, 1911; member of the American Medical Association; had been affiliated with the North American Aviation plant and on the staff of the Methodist Hospital in Dallas; died June 2, aged 56, of coronary thrombosis.

Fred Fay Dexter, Springfield, Mass.; Harvard Medical School, Boston, 1904; member of the American Medical Association; formerly secretary of the Eastern Hampden Medical Association; served as medical examiner for the Monarch Life Insurance Company; died July 10, aged 66, of heart disease.

Henry August Dirschedl, Pottsville, Pa.; Medico-Chirurgical College of Philadelphia, 1910; member of the American Medical Association; served as a member and president of the city board of health; for many years medical inspector of the public school system; formerly county prison physician and coroner; for many years on the staffs of the Good Samaritan, Pottsville and Warne hospitals; died July 14, aged 71, of coronary thrombosis.

Howard L. Dumble, Hood River, Ore.; National University Medical Department, Washington, D. C., 1893; died in the Hood River Hospital July 6, aged 85, of cerebral hemorrhage and heart disease.

John L. Dunkel, Fremont, Ind.; Medical College of Ohio, Cincinnati, 1896; died in the Leila Y. Post Montgomery Hospital, Battle Creek, Mich., July 10, aged 80, of heart disease.

Rubie Epstein ✠ Trenton, N. J.; Hahnemann Medical College and Hospital of Philadelphia, 1924; on the staff of the McKinley Memorial Hospital, where he died July 28, aged 47, of acute cardiac failure and coronary occlusion.

Andrew Joseph Erickson, Chicago; Chicago Medical School, 1921; on the staffs of the Belmont and Walther Memorial hospitals; died in St. Anne's Hospital July 29, aged 58, of injuries received in an automobile accident.

William Bingham Ewing, West Grove, Pa.; University of Pennsylvania Department of Medicine, Philadelphia, 1900; owner of the West Grove Hospital, where he died July 31, aged 69, of coronary thrombosis.

Albert Samuel Fay ✠ Schenectady, N. Y.; University of Vermont College of Medicine, Burlington, 1896; past president of the Schenectady County Medical Society; consulting physician to the Ellis Hospital; died July 2, aged 72, of carcinoma.

John Richard Frazier, Fort Worth, Texas; Jefferson Medical College of Philadelphia, 1884; served on the Selective Service Board during World War I; past president of the old Fort Worth Medical Society, predecessor of the present Tarrant County Medical Society, serving as president of the latter organization in 1907; first company physician for Swift and Company; died in the Pennsylvania Avenue Hospital June 11, aged 83, of myocarditis and pulmonary edema.

Neil Alexander Gates ✠ Ann Arbor, Mich.; University of Michigan Department of Medicine and Surgery, Ann Arbor, 1897; died in St. Joseph's Mercy Hospital July 16, aged 72, of primary carcinoma of the liver.

Charles Patterson Geddes, New Castle, Pa.; Cleveland University of Medicine and Surgery, 1897; died in the Torrance (Pa.) State Hospital May 26, aged 76, of chronic myocardial disease and arteriosclerosis.

Chesley T. J. Giles, Greenville, S. C.; University of Georgia Medical Department, Augusta, 1899; member of the American Medical Association; honorary member of the South Carolina Medical Association; on the staff of the Greenville General Hospital, where he died July 5, aged 76, of coronary thrombosis.

Horace Mark Hall, Los Angeles; Chicago Medical College, 1883; died July 9, aged 91, of angina pectoris.

William John Hammond ✠ East Walpole, Mass.; Harvard Medical School, Boston, 1899; specialist certified by the American Board of Psychiatry and Neurology, Inc.; member of the American Psychiatric Association, New England Society of Psychiatry and the Association for Research in Nervous and Mental Disease; founder and superintendent of the Westwood Lodge, Westwood; died July 4, aged 75, of pneumonia.

David M. Hestand, Houston, Texas; Baylor University College of Medicine, Dallas, 1914; died July 1, aged 58, of carcinoma of the lung with metastasis to the liver.

Foster Cannon Howard, Baltimore; Maryland Medical College, Baltimore, 1912; served during World War I and in the regular U. S. Army; died June 19, aged 56, of coronary heart disease.

Jesse Headen Inman ✠ Bakersfield, Calif.; University of California Medical School, San Francisco, 1929; member of the board of directors and past president of the Kern County Medical Society; member of the American Society of Clinical Pathologists and the American Heart Association; member of the board of the Kern County Tuberculosis Association; on the staffs of the Kern General and Mercy hospitals; died July 15, aged 43, of carcinoma of the descending colon.

U. H. Johnson, Port Richmond, Va.; Medical College of Virginia, Richmond, 1905; died in the Johnston-Willis Hospital, Richmond, July 11, aged 68, of cerebral hemorrhage.

John Paul Keith, Louisville, Ky.; Hospital College of Medicine, Louisville, 1904; member of the Radiological Society of North America, Inc.; on the staff of the Baptist Hospital; died on his farm near Anchorage, June 30, aged 66, of coronary occlusion.

Isaac Celsus Kiser, Piqua, Ohio; Ohio Medical University Columbus, 1897; member of the American Medical Association; also a graduate in pharmacy; served as a member of the state legislature; on the staff of the Memorial Hospital; died June 26, aged 71, of heart disease.

Felix J. Krych, Forty Fort, Pa.; Atlantic Medical College, Baltimore, 1909; member of the American Medical Association; on the staff of the Wyoming Valley Homeopathic Hospital, Wilkes-Barre, where he died June 26, aged 62, of bronchopneumonia.

William Everett Lloyd ✠ Columbus, Ohio; Ohio Medical University, Columbus, 1905; in 1917 joined the medical department of the state industrial commission as claims examiner; member of the Columbus Academy of Medicine; died in the University Hospital July 12, aged 67, of chronic myelogenous leukemia.

Howard Kimball Longshore, Glenside, Pa.; Maryland Medical College, Baltimore, 1911; served on the staff of the Hospital of the Woman's Medical College of Philadelphia; died at his summer home in Thousand Islands, N. Y., July 12, aged 62, of coronary thrombosis.

Julius D. Love ✠ Philadelphia; Medico-Chirurgical College of Philadelphia, 1893; on the staff of the Mount Sinai Hospital; died July 4, aged 86, of cardiovascular renal disease.

Fay Melville Marsh ✠ Ionia, Mich.; Saginaw (Mich.) Valley Medical College, 1900; also a graduate in pharmacy; past president of the Ionia-Montcalm Counties Medical Society; city physician and health officer; for many years physician for the Ionia County Home; on the staff of the Ionia County Memorial Hospital; director of the State Savings Bank of Ionia; died July 2, aged 69, of coronary thrombosis.

Bertrand Frank Marshall, Westbrook, Maine; Dartmouth Medical School, Hanover, N. H., 1888; member of the American Medical Association; honorary member of the Maine Medical Association, which in 1938 presented him with its fifty year service medal; served as city physician, school physician and police commissioner; died June 22, aged 78.

William Thomas McKinney, Louisville, Ky.; Vanderbilt University School of Medicine, Nashville, Tenn., 1899; medical director of the Kentucky Home Mutual Life Insurance Company; died in St. Joseph Infirmary June 29, aged 77, of endocarditis.

Edgar Paul Murdock ✠ Guadalupe, Calif.; Bennett Medical College, Chicago, 1909; on the staff of Our Lady of Perpetual Help Hospital in Santa Maria, where he died June 24, aged 59, of cardiorenal vascular disease.

John Christopher O'Day, Honolulu, Hawaii; National Normal University College of Medicine, Lebanon, Ohio, 1896; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1900; fellow of the American College of Surgeons; author of two books; died July 2, aged 78, of arteriosclerotic heart disease.

John Howard Prill, Chetek, Wis.; Milwaukee Medical College, 1910; for many years affiliated with various Veterans Administration facilities; died June 15, aged 58, of angina pectoris.

Samuel A. Reynolds, Vashti, Va.; Medical College of Virginia, Richmond, 1887; member of the American Medical Association; died July 8, aged 80, of heart disease.

Amos Elmer Robinson, Leachville, Ark.; University of Tennessee College of Medicine, Memphis, 1915; member of the American Medical Association; past president of the Mississippi County Medical Society; served in the medical corps of the U. S. Army overseas during World War I; on the staff of the Walls Hospital, Blytheville; died in St. Bernard's Hospital, Jonesboro, July 5, aged 57, of heart disease.

John Frederick Stageman, Council Bluffs, Iowa; John A. Creighton Medical College, Omaha, 1903; on the associate staff of the Jennie Edmundson Hospital and the Mercy Hospital, where he died June 20, aged 69, of cerebral hemorrhage.

Dewey Sutton, San Angelo, Texas; University of Louisville (Ky.) Medical Department, 1910; member of the American Medical Association; served in the medical corps of the U. S. Army during World War I; died June 2, aged 61, of cerebral hemorrhage.

Cassell Clark Tucker ✠ Greencastle, Ind.; Harvard Medical School, Boston, 1915; awarded British Military Cross for service overseas during World War I; vice president and director of the First-Citizens Bank and Trust Company; on the staff of the Putnam County Hospital, where he died June 6, aged 54, of coronary thrombosis.

John James Tully, Stockton, Calif.; Cooper Medical College, San Francisco, 1886; died in the Stanford Lane Hospital, San Francisco, June 4, aged 82, of arteriosclerotic myocardial failure.

Vivian H. Vandeventer ✠ Ishpeming, Mich.; College of Physicians and Surgeons, Baltimore, 1896; served as president and vice president of the Upper Peninsula Medical Society; fellow of the American College of Surgeons; for many years health officer of Ishpeming and chief of the staff of the Ishpeming Hospital; died July 3, aged 73, of cerebral hemorrhage.

Hedwig Maria Ziskoven, Los Angeles; Rheinische Friedrich-Wilhelms-Universität Medizinische Fakultät, Bonn, Prussia, Germany, 1921; member of the American Medical Association; on the staff of the California Hospital; died July 10, aged 50, of tuberculosis.

Correspondence

DERMATOPHYTOSIS AND ONYCHOMYCOSIS

To the Editor:—In reply to Dr. K. P. A. Taylor's criticism (THE JOURNAL, July 7, p. 750) of an article by me on dermatophytosis and onychomycosis (THE JOURNAL, May 12, p. 77), the paper dealt primarily with the cutaneous manifestations of the fungi causing dermatophytosis and onychomycosis rather than with methods of treatment. Only the most important and proved methods of treatment were noted.

Permanent ablation of fungous infected toe nails outlined by Dr. Taylor is a radical measure. The absence of finger nails would subject the patient to lifelong embarrassment. Elimination of the fungi in the nails would not necessarily cure the infection. When toe nails are infected, especially with Tricophyton purpureum, there is usually a concurrent infection of the toes and soles. The refugees that he mentioned as being unable to enter the country because of chronic onchomycosis of the T. purpureum type were probably still harboring T. purpureum in the toes and soles even after ablation of the nails.

I still believe that the more conservative method is preferable, as I mentioned in my paper, though it requires more careful therapy and is time consuming. Of nine toe nails infected with T. purpureum in 1 patient within the last year, I have cured seven by this method. First all infected portions of the nail plate are painstakingly removed by clipping and paring. This is followed by the application of salicylic acid to the nail and nail bed, repeating the procedure until a new nail is firmly attached to the nail bed. Strong fungicides are applied periodically until a normal nail has grown in. This treatment may take six months or longer. Concomitant infection of the skin is treated at the same time.

Dr. Louis Tobin of the New York Skin and Cancer Unit has been successful in treating mycotic nails by simple evulsion. The after-treatment includes the application of strong fungicides. He reports cures in 80 per cent of these cases.

Another method mentioned by Dr. Taylor, that of freezing the affected skin areas with ethyl chloride, was tried at the New York Skin and Cancer Unit in a series of cases this year. Our conclusions were the same as those of Drs. J. H. Lewis and W. J. Morginson (Treatment of Trichophytosis with Ethyl Chloride, *Arch. Dermat. & Syph.* **50**:243 [Oct.] 1944), who found that "recurrences are experienced in practically all instances within ten days."

Treatment of dermatophytosis and onychomycosis must vary according to the infecting organism and the cutaneous manifestations. Any infection due to T. purpureum is a tedious and a difficult one to cure. It is hoped that in the future more effective fungicides may be found to clear these fungous infections more quickly and completely.

ROYAL M. MONTGOMERY, M.D., New York.

RHUS DERMATITIS

To the Editor:—I wish to substantiate the statement of Francis E. Park (THE JOURNAL, August 18, p. 1186) that steaming hot water is an effective treatment for rhus dermatitis.

Thirty years ago while on a horseback trip through the Feather River Canyon I became disabled with poison oak. At an Indian camp the Indians treated me with steaming hot water from a mineral spring. I enthusiastically carried a bottle of the water away with me but later found steaming tap water to be equally effective. Some of my friends have substituted live coals held close or infra-red from bathroom heaters or cigarets.

The rationale of the treatment may possibly be explained by a detoxification or oxidation of the phenols or catechols in the oils or oleoresins embedded in the skin.

The water should be about 130 F. or slightly over and the application should produce a mild first degree burn. Moderately hot water seems to be useless or merely to aggravate the condition. The treatment is rather heroic, and only small areas can be treated at a time. A sponge stick is useful in applying the heat. I have never used the treatment during the bullous stage of a severe case.

It is doubtful whether this homely treatment will prove popular, owing to the attending discomfort; but it is hoped that the possibility of oxidation or detoxification of poison oak and poison ivy by intense heat or enzymes such as tyrosinase will be subject to further investigation by those best qualified to undertake it.

ROBERT A. POWERS, M.D., Palo Alto, Calif.

TESTS FOR INFECTIOUS HEPATITIS

To the Editor:—In regard to the methylene blue test used in infectious hepatitis, as reported in recent issues of THE JOURNAL, I have made some of the following observations:

One patient with early clinical jaundice of the infectious hepatitis type did not have a positive methylene blue test (5 drops of methylene blue with a still green coloration of the urine).

Patients recovering from infectious hepatitis who showed a negative methylene blue test still had bilirubin in the urine.

Patients not suffering from infectious hepatitis will show a green coloration of the urine with as high as 3 drops of methylene blue before the blue coloration is noted. Normally one does not have bilirubin in the urine.

I have made serial dilutions of an atabrine solution (yellow) and have demonstrated a progressive increase in the number of drops of methylene blue needed to change the solution from green to blue, going even beyond the 5 drop "positive" reaction, depending on how yellow the solution is made.

I believe that the so-called "positive methylene blue test" of the urine as used in infectious hepatitis cases is equivocal.

O. W. HAFFKE, Captain, M. C., A. U. S.

Medical Examinations and Licensure

COMING EXAMINATIONS AND MEETINGS

BOARDS OF MEDICAL EXAMINERS
BOARDS OF EXAMINERS IN THE BASIC SCIENCES

Examinations of the boards of medical examiners and boards of examiners in the basic sciences were published in THE JOURNAL, Oct. 6, page 478.

NATIONAL BOARD OF MEDICAL EXAMINERS

NATIONAL BOARD OF MEDICAL EXAMINERS: Parts I and II, Nov. 12-14. Part III, New York City, Oct. 15-17; Boston, Oct. 16-17. Exec. Sec., Mr. E. S. Elwood, 225 S. 15th Street, Philadelphia.

EXAMINING BOARDS IN SPECIALTIES

AMERICAN BOARD OF ANESTHESIOLOGY: *Written.* Various centers, Jan. 18. Final date for filing application is Oct. 20. *Oral.* Various centers, Oct. 1946. Sec., Dr. Paul M. Wood, 745 Fifth Ave., New York 24.

AMERICAN BOARD OF DERMATOLOGY & SYPHILOGY: *Written. Group B.* April 22. *Oral. Group A and B.* June 6-8. Final date for filing application is March 1. Sec., Dr. George M. Lewis, 66 E. 66th St., New York 21.

AMERICAN BOARD OF NEUROLOGICAL SURGERY: *Oral.* Chicago, May 27. Final date for filing application is Feb. 1. Sec., Dr. P. C. Bucy, 912 S. Wood St., Chicago 12.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY: *Written. Part I.* Various centers, Feb. 2. Final date for filing application is Nov. 1. Sec., Dr. Paul Titus, 1015 Highland Bldg., Pittsburgh 6.

AMERICAN BOARD OF OPHTHALMOLOGY: Chicago, Jan. 18-22 and Los Angeles, Jan. 28-Feb. 1. Sec., Dr. S. Judd Beach, 56 Ivie Rd., Cape Cottage, Me.

AMERICAN BOARD OF OTOLARYNGOLOGY: Spring 1946. Sec., Dr. Dean M. Lierle, University Hospital, Iowa City, Ia.

AMERICAN BOARD OF PEDIATRICS: *Written.* Locally, Oct. 19. *Oral.* Atlantic City, Dec. 7-8. Sec., Dr. C. A. Aldrich, 115½ First Ave., S.W., Rochester, Minn.

AMERICAN BOARD OF SURGERY. *Written.* Part I. Spring 1946. Final date for filing application is Dec. 1. Sec., Dr. J. Stewart Rodman, 225 South 15th St., Philadelphia.

AMERICAN BOARD OF UROLOGY: *Written.* Various centers, Dec. 9. *Oral.* Chicago, February 1946. Sec., Dr. Gilbert J. Thomas, 1409 Willow St., Minneapolis 4.

Current Medical Literature

AMERICAN

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Titles marked with an asterisk (*) are abstracted below.

American Journal of Public Health, New York

35:675-782 (July) 1945. **Partial Index**

Role of Beta Hemolytic Streptococci in Common Respiratory Disease. E. Strauss.—p. 675.
Bacteria "Count"—Estimate Capable of Accurate Interpretation. J. D. Brew and R. S. Breed.—p. 683.
World War I and Tuberculosis: Statistical Summary and Review. G. J. Drolet.—p. 689.
Problems of Morbidity Reporting from Standpoint of National Public Health Activities. G. S. J. Perrott.—p. 698.
*Applications of Complement Fixation Test in Study of Rickettsial Diseases. Ida A. Bengtson.—p. 701.
Mental Hygiene in Public Health Program: Its Implications. C. F. McClintic.—p. 708.

Complement Fixation Test in Rickettsial Diseases.—Bengtson says that since 1941 there has been an opportunity to make use of the complement fixation test for rickettsial diseases on a large scale at the National Institute of Health. Over 10,000 tests have been made. The complement fixation test was found to furnish evidence of rickettsial infection earlier than the Weil-Felix test in 23.9 per cent of the human serums tested. From an epidemiologic standpoint the complement fixation test is superior to the Weil-Felix test because a positive complement reaction persists longer than does a positive Weil-Felix reaction. Low titers are significant in the complement fixation test, as indicated by negative results on a number of nonrickettsial and normal serums.

California and Western Medicine, San Francisco

63:1-62 (July) 1945

Thomas M. Logan, Organizer of California State Board of Health and Co-Founder of California Medical Association. G. P. Jones.—p. 6.
Rheumatoid Spondylitis, with Special Reference to Early Diagnostic Criteria. A. J. Present.—p. 10.
Voluminous Ventral Hernia: Surgical Regimen for Enormous Incisional Eventration: Report of Case. M. G. Henry.—p. 13.
Abscess of Tongue. C. V. Bernardin.—p. 16.

Journal of Allergy, St. Louis

16:165-208 (July) 1945

Transport of Antigen Through Body by Electrophoresis. A. Walzer and H. G. Golan.—p. 165.
Immunochemistry of Allergens: VII. Study of Homogeneity of Cottonseed-Globulin Preparations by Anaphylactic Reactions. E. J. Coulson, J. R. Spies and H. Stevens.—p. 176.
Method for Experimental Control of Particle Size of Therapeutic Aerosols. H. A. Abramson and M. Demerec.—p. 184.
Response of Contact Dermatitis Sites in Atopic Individuals to Subsequent Stimulation with Specific Wheal Inducing Atopens. M. Grolnick, Katherine L. Bowman and M. Walzer.—p. 188.
*Nonantigenic Property of Beeswax. L. N. Gay.—p. 192.
Allergy to Chemicals in Flour: Case of Dermatitis Due to Benzoic Acid. K. A. Baird.—p. 195.

Nonantigenic Property of Beeswax.—Gay states that no pollen could be identified in crude or filtered beeswax by microscopic examination. Beeswax cannot be kept in solution for intramuscular injection in a concentration greater than 4 per cent wax by weight in peanut oil. In this mixture there is no tendency for the wax to separate from the oil. No reaction occurred by scratch or intracutaneous tests with 4 per cent beeswax-peanut oil mixture in any of the patients who were tested, even though they had clinical hay fever or asthma due to one or more varieties of pollens. The control solutions gave typical reactions. The results of the studies indicate that beeswax, combined with peanut oil, because of its nonantigenic character, should be an ideal medium for delaying the absorption of penicillin when administered by subcutaneous or intramuscular methods.

Journal Industrial Hygiene & Toxicology, Baltimore

27:147-182 (June) 1945

Clinical Physiological Observations on Welders with Pulmonary Siderosis and Foundry Men with Nodular Uncomplicated Silicosis. N. Enzer, E. Simonson and A. M. Evans.—p. 147.
Balances of Fluorine Ingested from Various Sources in Food and Water by Five Young Men: Excretion of Fluorine Through Skin. F. J. McClure, H. H. Mitchell, T. S. Hamilton and C. A. Kinser.—p. 159.
Polarographic Determination of Toxic Metal Fumes in Air. L. Levine.—p. 171.
Rapid Wet-Ashing Procedure for Urinalyses. G. S. Winn.—p. 178.

Journal of Nervous and Mental Disease, New York

102:107-220 (Aug.) 1945

Devic's Disease: Clinical Review and Case Report. S. J. Silbermann.—p. 107.
Character and Traumatic Syndrome. H. Kelman.—p. 121.
Treatment of Soldiers Complaining of Backache: Some Observations Concerning Posture and Attitude. H. M. Fox.—p. 154.
Speech Disorders in World War II: II. Further Studies. W. G. Peacher.—p. 165.
Electroencephalographic Findings During and After Acute Encephalitis and Meningoencephalitis. I. S. Ross.—p. 172.
Hippuric Acid Liver Function Test in Schizophrenia. Y. T. Wong.—p. 183.
Some Neurologic and Neurovegetative Phenomena Occurring During and After Electroshock. H. H. Fleischhacker.—p. 185.
Note on Initial and Succeeding Voltages to Obtain Grand Mal in Electroshock Therapy. J. H. Huddleson and L. Lowinger.—p. 191.

Military Surgeon, Washington, D. C.

97:1-84 (July) 1945

Health Makes Wealth for Americas. G. C. Dunham.—p. 1.
Gleanings from Medical Service of General Hospital. J. S. Sweeney.—p. 7.
Late Manifestations of Abdominal Wounds of War. M. G. Beaver and R. S. Smith.—p. 13.
Parasites and War. G. Lapage.—p. 23.
Use of Animals in Present War. R. S. MacKellar Jr.—p. 30.
Observations on Mumps in Soldiers. A. T. Haerem.—p. 33.
*Carbon Tetrachloride Poisoning: Report of 20 Cases with One Death. S. M. Dillenberg and C. M. Thompson.—p. 39.
Sanitary Engineering Activities of Corps of Engineers. B. A. Poole.—p. 44
Special Sanitary Engineering Problems. J. B. Baty.—p. 51.
Suggestion in Treatment of Dermatomycosis. R. L. Fruin.—p. 56.
Local Use of Penicillin Preparations in Cutaneous Diseases.—p. 57.
Hysterical Wry Neck of Soldiers. B. B. King.—p. 59.
Atypical Reaction to Quinine Therapy. C. C. Greene.—p. 61.
Pitfalls in Diagnosis of Primary Syphilis. J. M. Spatz.—p. 64.

Carbon Tetrachloride Poisoning.—Dillenberg and Thompson report observations on 20 patients with carbon tetrachloride poisoning, who used the solvent in a confined compartment of a submarine without adequate ventilation. Only 2 men worked with the solvent; the rest inhaled the fumes by being in or near the compartment over a period of two days. The initial symptoms in all 20 cases were headache, malaise, backache, anorexia, nausea and vomiting. Albuminuria was present in 11 cases on admission. These 11 patients were admitted to the dispensary for both the albuminuria and the severe gastrointestinal symptoms. The other 9 were treated aboard the submarine tender and recovered without complications in four days. Kidney damage was present in 11 cases on admission to the dispensary. This was manifested by slight albuminuria to anuria, which persisted for several days. The 4 severe cases presented a typical toxic nephrotic syndrome, as evidenced by puffiness and swelling of the soft tissues of the face, hands and feet. One patient developed acute pulmonary edema while apparently on the road to recovery. This was a late complication occurring nine days after exposure and terminated fatally despite all treatment. There were positive roentgen findings in the lungs of the 4 severe cases. The histories and roentgenograms of the 4 critically ill patients are presented with the necropsy and microscopic findings in the fatal case. Microscopic examination revealed severe damage to the liver, kidney and adrenals. Patients were treated symptomatically along with intravenous dextrose and calcium gluconate. Carbon tetrachloride is dangerous because it can be absorbed through the skin, inhaled and ingested. It is essential that instructions be given regarding its use.

New England Journal of Medicine, Boston

233:173-198 (Aug. 9) 1945

*Senile Psychosis and Pellagra: Report of 2 Cases. H. A. Meyersburg. —p. 173.
Acute Infectious Lymphocytosis in Young Adults. P. A. Duncan. —p. 177.
*Pediculosis Corporis and Leg Ulcers. G. E. Morris.—p. 180.
Mycotic Infections (concluded). J. G. Downing and N. F. Conant. —p. 181.
Gaucher's Disease: Ruptured Spleen. C. Miller.—p. 189.
Eclampsia. E. M. Chapman.—p. 194.

Senile Psychosis and Pellagra.—Meyersburg says that several patients with psychoses of the senile type have been observed to improve after therapy with niacin, thiamine, riboflavin and substances rich in the vitamin B complex. Review of their records has shown 2 with atypical pellagra. In the first patient, a woman aged 55, the late manifestations were like those of a vascular disturbance, although the earlier ones were neurasthenic. The latter disturbances, the memory defects and the confabulatory episodes resembled the Korsakoff syndrome, which may occur in either the senile psychoses or in pellagra. The episodes of stupor were similar to those described in pellagrins. The skin lesions were those of riboflavin deficiency, and the mucosal alterations were the combined effect of several deficiencies. The response to treatment puts this case definitely in the pellagra group. The effect of nutritional inadequacy in a patient with a subclinical encephalopathy of the combined senile and vascular type was illustrated by the second patient, a man aged 78. The reestablishment of adequate neurologic function and the concurrent disappearance of the somatic signs of deficiency under therapy indicate that the neuropsychiatric dysfunction was related to biochemical imbalance. The neuropsychiatric manifestations of pellagra usually appear after dermal, oral or gastrointestinal manifestations have developed. In a small proportion of cases, however, neuropsychiatric signs alone are manifest. The senile pellagrous type of encephalopathy may respond well to treatment with crystalline vitamin B products or with natural vitamin B concentrates. The recognition of this group of cases may permit effective therapy. The maintenance of an optimal dietary by the normal aged person as well as by the senile invalid is of primary importance.

Pediculosis Corporis and Leg Ulcers.—Morris stresses that multiple ulcers of the legs are frequently due to infestation of the clothing with body lice. Search for such parasites should be made in all suspicious cases. In a large hospital clinic ulcers of the leg due to pediculosis corporis rank second in frequency only to the so-called stasis (varicose) ulcers. Such lesions respond well to eradication of the body lice followed by the local application on alternate days of a 1 per cent aqueous solution of gentian violet and 2 per cent allantoin in a water soluble emulsion base.

Ohio State Medical Journal, Columbus

41:685-780 (Aug.) 1945

Experiences with Photoroentgen Method in Chest Surveys: Analysis of 156,000 Examinations. A. Fine and T. B. Steinhausen.—p. 709.
Factors in Reducing Recurrence Rate in Therapy of Varicose Veins. R. K. Finley and J. M. Shaffer.—p. 711.
Clinical Use of Anticoagulants. Helen I. Glueck.—p. 714.
Anatomic and Physiologic Principles Underlying Plastic Surgery of Nose. R. S. Rosedale.—p. 724.
Adrenal Sympathetic Syndrome Associated with Paraganglioma of Organ of Zuckerkandl. E. F. Koster.—p. 729.
Fifty Years of Cleveland Medical Library. R. M. Stecher.—p. 732.

Psychosomatic Medicine, Baltimore

7:195-256 (July) 1945

Identification Mechanisms in Coronary Occlusion. J. A. Arlow.—p. 195.
Towards Clarification of Concept of Emotion. Nina Bull.—p. 210.
Quantification of Psychophysiologic Measures. M. Sherman and H. Jost. —p. 215.
Personality and Psychosomatic Disturbances in Patients on Medical and Surgical Wards: Survey of 450 Admissions. Bela Mittelmann, A. Weider, K. Brodman, D. Wechsler and H. G. Wolff.—p. 220.

South Carolina Medical Assn. Journal, Florence

61:157-185 (July) 1945

Ambulatory Treatment of Varicose Veins. W. H. Prioleau.—p. 157.
Aneurysm of Abdominal Aorta: Case Report. T. M. Northrop.—p. 159.
Bacteriologic and Other Studies in Public Aspects of Gonococcal Infection. H. Boatwright.—p. 160.

Surgery, St. Louis

18:1-132 (July) 1945

Factors Influencing Trends in Anesthesia. J. S. Lundy, C. Adams and T. H. Seldon.—p. 1.
Explosions in Anesthesia: Review of Literature. F. Cole.—p. 7.
Cyclopropane—Personal Evaluation. R. M. Waters.—p. 26.
Prolonged Anesthesia. R. T. Knight and J. W. Baird.—p. 33.
Intercostal Nerve Block. S. Belinkoff.—p. 37.
Notes Regarding Use of Intravenous Sodium Pentothal Anesthesia in Major Surgical Cases. C. H. Shutt.—p. 43.
Curare in Anesthesia. S. C. Cullen.—p. 45.
Anesthetic Agents as Factors in Circulatory Reactions Induced by Hemorrhage. B. W. Zweifach, S. G. Hershey, E. A. Rovenstine, R. E. Lee and R. Chambers.—p. 48.
Pulsion Diverticulum of Hypopharynx at Pharyngoesophageal Junction: Surgical Treatments in 140 Cases. S. W. Harrington.—p. 66.
Closure of Bronchial Stump Following Lobectomy or Pneumonectomy. R. H. Sweet.—p. 82.
Ligation of Inferior Vena Cava. R. O. Northway and R. W. Buxton. —p. 85.
*Osteomyelitis of Skull—Its Treatment with Penicillin and Repair of Defect with Tantalum. M. T. Schnitker and W. D. McCarthy.—p. 94.
Radical Duodenopancreatectomy: Report of Successful Resection of Carcinoma of Duodenal Diverticulum Involving Head of Pancreas. J. E. Strode.—p. 115.

Osteomyelitis of Skull.—According to Schnitker and McCarthy, osteomyelitis of the frontal bone, secondary to frontal sinusitis, is one of the most fatal of surgical diseases. The primary infection, acute sinusitis, is fairly common but the complication of frontal osteomyelitis is relatively uncommon. In the fulminating type manifested by pitting doughy edema of the forehead it is imperative to do wide radical removal of the diseased osteomyelitic bone. Sulfonamide drugs have been advocated in addition to operation, but these drugs have their limitations. Penicillin has revolutionized the treatment. It is an excellent bacteriostatic agent; it overcomes the infection rapidly and limits its spread, permitting early operation with primary closure of the wound and rapid recovery. Until recently the inverted T incision was used with open packing of the wound and subsequent deforming scar of the forehead. With the use of penicillin a coronal incision is preferable, giving a more adequate exposure and allowing the removal of the diseased bone in one piece, so avoiding a deforming scar of the frontal scalp. When healing is complete and all infection has disappeared, repair of the underlying bone defect with insertion of a tantalum plate is carried out easily. The restoration of the smooth contour of the forehead is accomplished. The authors report 3 cases.

Texas State Journal of Medicine, Fort Worth

41:177-226 (Aug.) 1945

Prostatic Hypertrophy: Operative Procedures for Its Relief. J. R. Reagan and Q. B. Lee.—p. 183.
Facts and Figures on Cancer of Cervix and Endometrium and Incidence of These Diseases in Metropolitan City of Texas. T. R. Hannon. —p. 186.
Treatment of Carcinoma of Cervix Based on Clinical and Cellular Classification. J. D. Weaver.—p. 191.
Palliative Treatment of Incurable Malignant Disease. J. R. Maxfield Jr. —p. 195.
Physical Factors in Cancer. W. A. Selle.—p. 197.
Concept of Etiology and Control of Poliomyelitis and Its Complication—Infantile Paralysis. W. A. Coole.—p. 203.
Important Recent Developments in Laboratory Medicine. A. E. Rhoden. —p. 207.
Glycogen Storage Disease. F. Brooksaler.—p. 210.
Orientation of Private Practice and Public Health. V. E. Schulze. —p. 212.
Venereal Disease Control in Camp Bowie. G. A. Gray.—p. 213.

Western J. Surg., Obst. & Gynecology, Portland, Ore.

53:217-254 (July) 1945

Ulcers of Lower Extremities. M. A. Howard.—p. 217.
Sexual Infantilism in the Female. R. B. Greenblatt.—p. 222.
Cervical Pregnancy: Report of Case at Seventeen Weeks Gestation. H. E. Bowles.—p. 226.
Medical and Social Problems of Unmarried Mother and Her Child. N. R. Kavinoky.—p. 233.
Possible Use of Kymographic Tracing Instead of Endometrial Biopsy for Determination of Ovulation. K. J. Karnaky.—p. 237.
Gastric Adenomas: Pathologic Study. J. H. Rieniets and A. C. Broders. —p. 244

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

British Medical Journal, London

1:897-934 (June 30) 1945

Penicillin Therapy in Acute Bacterial Endocarditis. A. Dolphin and R. Cruickshank.—p. 897.
Staphylococcus Pyogenes Septicemia Treated with Penicillin: Report of 2 Cases. L. Howells, R. R. Hughes and R. Rankin.—p. 901.
*Local Penicillin Therapy in Ophthalmia Neonatorum. A. Sorsby.—p. 903.
Penicillin Treatment of Hand Infections. G. J. Grossmark and L. W. Plewes.—p. 906.
*Infected Bronchiectasis Treated with Intratracheal Penicillin. H. B. May and M. A. Floyer.—p. 907.
Effort Syndrome in West African Soldier. D. L. H. Goddard.—p. 908.

Local Penicillin Therapy in Ophthalmia Neonatorum.—Sorsby demonstrated that consistent results could be obtained in ophthalmia neonatorum when drops in a concentration of not less than 2,500 units per cubic centimeter were used; there were 21 recoveries in 22 cases so treated, against only 3 out of 8, 4 out of 7 and 6 out of 10 treated with penicillin in concentrations of 500, 1,000 and 1,500 units respectively. In a recent series of 38 cases 2 failed to respond. Twenty-five of the 38 cases had been treated by intensive application of penicillin (drops instilled every five minutes). The results were better than those obtained by the instillation of penicillin at half hourly or at hourly intervals. Severity of the clinical condition does not appear to affect the duration of treatment. Penicillin is effective against all the common causal organisms of ophthalmia neonatorum, including the presumed virus of inclusion blennorrhea. Local penicillin therapy is likely to replace general sulfonamide treatment as the method of choice in ophthalmia neonatorum.

Intratracheal Penicillin in Infected Bronchiectasis.—May and Floyer administered penicillin by injection of the solution into the trachea, using a technic similar to that employed in bronchography. The patient practiced postural drainage for twenty to forty minutes before the injection. The skin was rendered analgesic in the midline of the neck, between the cricoid cartilage and the first ring of the trachea. Then 2 cc. of 2 per cent amethocaine hydrochloride (decicain) was injected rapidly into the trachea and the patient was asked to avoid coughing. The syringe was removed from the needle, which was left in situ, and the patient was placed in such a position that fluid introduced into the trachea would run into the bronchiectatic cavities. A solution of penicillin containing 10,000 units per cubic centimeter was prepared and 5 to 8 cc. injected rapidly through the needle into the trachea, the needle being immediately withdrawn and the patient encouraged not to cough. The patient was kept leaning in the appropriate position for fifteen minutes after the injection. Daily treatment was carried out for eight to ten days. Of the 3 patients treated 1 was so improved that she declined lobectomy, as she felt that there was nothing wrong with her. The second patient was enabled to get over the latter months of pregnancy and delivery. The third patient, who was going downhill, was rendered fit for lobectomy to be considered. There would appear to be two uses for this form of therapy: (1) to improve the general condition of the patient before lobectomy; (2) to sterilize the bronchial cavities at regular intervals, especially during the winter. It might be used to replace bronchoscopy with suction of the creosote chamber. Intratracheal therapy should be combined with daily postural drainage. It is inevitable that the cavities will become reinfected, and it is too early to say how long they will remain sterile, but in cases in which the predominant pathogen is penicillin sensitive the treatment does provide at least temporary improvement.

Edinburgh Medical Journal

52:193-228 (June) 1945

Surgery Goes to War. W. G. Ogilvie.—p. 193.
Pathology of Stationary General Paralysis Following Treatment. E. Stengel.—p. 206.
The "Unsafe" Ear. J. F. Birrell.—p. 213.
Actinomycosis. G. H. Macnab.—p. 219.

Journal Obst. & Gynaec. of Brit. Empire, Manchester

52:217-312 (June) 1945

Influence of Social and Economic Factors on Stillbirths and Neonatal Deaths. D. Baird.—p. 217.
Case of Arrhenoblastoma Complicating Pregnancy. C. P. Brentnall. —p. 235.
Basal Body Temperature Graphs as an Index to Ovulation. P. Tompkins. —p. 241.
Changes in Numbers of Circulating Blood Platelets Following Experimental Traumas. Helen Wright.—p. 253.
Case of Retroperitoneal Hemorrhage Causing Death in Late Pregnancy. M. Kenny and I. Doniach.—p. 259.
*Series of 40 Cases of Vesicovaginal Fistula. G. B. Thomas.—p. 262.
Vesicovaginal Fistula. D. Joan Thompson.—p. 271.
*Peroneal Palsy as a Complication of Parturition. Eleanor Mills.—p. 278.

Vesicovaginal Fistula.—Thomas of the Madras Medical College reports 40 cases of vesicovaginal fistula. There were 18 juxtacervical, 5 midvaginal and 17 juxtaurethral fistulas. It is shown that the juxtacervical and midvaginal fistulas were all operable by the flap splitting method and that all but 1 in which operation was performed healed at the first attempt. By contrast the juxtaurethral fistulas were less successful, only 8 being cured out of 14 cases in which operation was performed. A technic for the flap splitting operation is described and illustrated, and other operations and the after-treatment are also described. The view is advanced that the repair by the abdominal route is probably only rarely necessary. It was not required once in this series. Transplantation of the ureters should be avoided if possible. Cesarean section is advocated in cases of pregnancy following a successful repair.

Peroneal Palsy.—Mills reviews 7 cases of peroneal palsy, 3 from personal observation and 4 from hospital records. These cases show that peroneal palsy follows difficult deliveries which entail extraction by forceps. The paralysis is unilateral. It occurs on the side opposite to the one occupied by the greatest diameter of the fetal skull in the majority of cases. The cause in most cases must be instrumentation. In the minority direct pressure of the fetal head may be the cause, though in these too instrumentation cannot be excluded. Pain and paresthesia, though transient and not severe, precede the paralysis. The paralysis affects the dorsiflexors and evertors of the ankle. The paralysis will usually clear up, and in those cases in which permanent damage is done the final paralysis is considerably less than the initial loss of function.

Lancet, London

1:807-838 (June 30) 1945

Spirit of Research; Plea for Independence. M. Gordon.—p. 807.
Lymphogranuloma Inguinale in Royal Air Force. C. R. McLaughlin. —p. 807.
Production of Sterile and Stable Penicillinase. W. Smith and Muriel M. Smith—p. 809.
Iliac Hernia After Bone Grafting. M. C. Oldfield.—p. 810.
*Tropical Eosinophilia as Seen in England. J. Apley and G. H. Grant. —p. 812.
Field Method for Direct Estimation of Mepacrine in Plasma and Blood. E. J. King and Margaret Gilchrist.—p. 814.
Decomposition of Trilene in Closed Circuit Anesthesia. J. B. Firth and R. E. Stuckey.—p. 814.
Extraoral Pin Fixation for Fractured Mandible: Improved Apparatus. A. B. MacGregor.—p. 816.
Serologic Typing of Meningeal Strains of H. Influenzae. Edith A. Straker.—p. 817.
Erythema Nodosum: Severe Type in Middle Aged Women. E. Frankel. —p. 817.

Tropical Eosinophilia.—Apley and Grant say that the combination of eosinophilia and pulmonary lesions is common to many conditions, such as Loeffler's syndrome, tropical eosinophilia, periarteritis nodosa, bronchial asthma and some intestinal infestations. With regard to Loeffler's syndrome and tropical eosinophilia, the author suggested in a previous paper that their differentiation was more apparent than real and that the gradation between cases illustrating the two conditions renders it more profitable to consider them as the manifestation of one type of disease process. They think that the combination of eosinophilia with pulmonary disease is probably an allergic manifestation, an end result arising from a variety of allergens. Five case histories are tabulated of men returning from the tropics with this combination. All 5 cases responded by complete clinical cure and fall of blood eosinophilia to a short course of neoarsphenamine injections.

Book Notices

The Extremities. By Daniel P. Quiring, Ph.D., Beatrice A. Boyle, Erna L. Boroush and Bernardine Lufkin. Paper. Price, $2.50. Pp. 55, with 106 illustrations. Cleveland, Ohio: Cleveland Clinic Foundation, 1945.

This is a carefully worked out and precisely illustrated textbook which succinctly describes the points of anatomic and surgical interest in the musculature of the extremities. The bulk of the book consists of line drawings illustrating the origin, insertion and motor point and the nervous and arterial supply of each muscle individually. Careful attention is paid to the site of entrance into the muscle of its arterial and nervous supply. The exact relationship of the muscle to the skeleton is well brought out. In the caption for each illustration the aforementioned items are enumerated and reference is made to the main functions of the muscle. The remaining five illustrations point out in a superficial manner the salient points in the skeleton and in the vascular and nervous trees of the extremities.

The excellent line drawings are clear and unembellished by extraneous detail, although a little shading in the correct locations would have made some of the illustrations easier to assimilate rapidly.

A valuable addition to the caption of each drawing is a list of page references for each muscle in Gray's Anatomy and in Cunningham's Anatomy. Page numbers of illustrations, which are particularly clear, are included in these references.

The well catalogued brevity of this book renders it most useful for the student of anatomy, of physical therapy and of extremity surgery.

Psychology in General Practice. Edited by Alan Moncrieff, M.D., F.R.C.P. The Practitioner Handbooks. Published on behalf of The Practitioner. Cloth. Price, 12s. 6d. Pp. 199. London: Eyre and Spottiswoode, Ltd., 1945.

This compact volume, eleventh in the Practitioner Handbook series, performs just what it promises. In seventeen brief chapters contributed by specialists, the mental aspects of disease are presented simply and sympathetically to the general practitioner. He is encouraged by the common sense statements to be alert to, sympathetic with and interested in the psychologic factors which contribute to nearly all symptom pictures and are of prime importance in a large fraction of the cases reaching his office. As Culpin says, an eminent psychiatrist wrote that he saw more psychologic cases in general practice than he did later when specializing in the subject. Further, the practitioner is urged to try his hand at simple psychotherapy and to seek expert help freely and is given the needed criteria on which to make his judgments.

General statements on classification of mental disease, case taking, differential diagnosis and therapy are followed by sections on the depressive, anxiety and compulsive states, hysteria, visceral neuroses, problems of childhood, mental defect, delinquency and sex problems. The chapters on the practitioner's attitude (Culpin), anxiety states (Ling) and obsessions (Boyle) are especially vivid as presented. It is a healthy sign that a chapter on psychiatric social work is included; one on admission to and discharge from mental hospitals, being directed to the English situation—as is the whole volume—will be of less interest to American physicians.

The influence of the war is shown in the treatment of the subject matter, the illustrative cases and the poor quality of paper in the volume. The approach to the subject avoids esoteric and controversial matters and, while the psychoanalytic point of view is well represented, all views are given attention. Each author has made a visible effort to write for the general practitioner, and most have happily succeeded. It is high time these matters received the earnest attention of the nonspecialist and that Culpin's introductory statement be made obsolete: "After lecturing to medical practitioners, I have often been approached and told 'I never come across the symptoms you have been talking about,' and the statement has often been accompanied by a manner—perhaps tinged with only slightly masked incredulity—that has tempted me to reply 'Quite so; and you never will.'"

Food Regulation and Compliance. Volume I. By Arthur D. Herrick. Cloth. Price, $10. Pp. 646. New York: Revere Publishing Company, 1944.

This volume is written by an experienced food and drug consultant on problems relating to the laws governing food manufacture and marketing. The laws themselves are not reproduced but their application to all aspects of food labeling is discussed in detail. Following a brief historical sketch on the evolution of food regulation, twenty chapters are devoted to problems of food labeling. Under each subject the regulations are outlined and their meaning is interpreted. Subsequently all possible ways in which intentional or unintentional violation might be made are discussed. The frequent use of sample statements or situations serves to make all points clear and the information practical. The sections dealing with food standards and their violation are particularly informative. The style of presentation is simple, straightforward and nontechnical. Frequent quotations from governmental trade correspondence and court decisions add specificity. This book can be recommended as exceedingly valuable to any one interested in or confronted with problems of food labeling.

Curso de malariología, División de malariología, Ministerio de sanidad y asistencia social, Dirección de salubridad pública, Venezuela. In Two Volumes. Boards. No pagination, with illustrations. Maracay, Aragua, Venezuela, 1944.

This is an outline, in Spanish, of a course in malariology given in Maracay under the direction of Dr. Arnoldo Gabaldon, chief of the Division of Malariology, Venezuela, from Oct. 2 to Dec. 1, 1944 to twenty-six students from Bolivia, Colombia, Ecuador, Peru and Venezuela and one from the United States. The first forty-nine pages consist simply of a schedule by hours of the lectures and class exercises. There follow in the first volume introductory, hematologic and entomologic sections, presented largely in outline, doubtless conforming to lectures attended by the students. The second volume covers in the same way various aspects of epidemiology, treatment and prophylaxis. The two volumes no doubt were useful to the students concerned and would be of interest to any agency planning a similar course. But they do not constitute a textbook, manual or reference book in the usual sense.

Tierexperimentelle Untersuchungen über die Wirkung langdauernder Follikelhormonapplikation und die hormonale Tumorentstehung. Von Dr. Hubert von Wattenwyl, Oberarzt am Frauenspital Basel. Cloth. Price, 24 Swiss francs. Pp. 235, with illustrations. Basel: Benno Schwabe & Co., 1944.

In this monograph are reported the author's experiments on the effects of long continued administration of natural and synthetic estrogens to guinea pigs and other rodents. His experiences confirm the work of others, particularly that of Lipschutz of Chile, in that he was able to produce extragenital fibromas in the domestic guinea pig by the implantation of pellets of natural estrogens as well as diethylstilbestrol. He observed a transient loss of hair in some of his animals. Others failed to gain weight at the same rate as the controls. Noteworthy local and systemic effects of long continued estrogenic stimulation were not obvious. The experiments were not numerous but they were carefully planned and executed. There is a complete bibliography.

An Introduction to the Medical Sciences for Medical Record Librarians. By J. H. Neese, M.D., and F. H. Swett, Ph.D. Edited by F. H. Swett, Professor of Anatomy, Duke University School of Medicine, Durham, N. C. Cloth. Price, $2.50. Pp. 223. Durham, N. C.: Duke University Press, 1944.

The major portion of this book is devoted to discussions of anatomy, physiology and some of the pathologic processes of the various systems of the body. The discussion follows the classification of the Standard Nomenclature of Disease. The remainder treats of such subjects as vitamins, anesthesia, medical prefixes and suffixes, drugs and abbreviations. There is a glossary. The volume is designed for the medical record librarian. The teaching schedule as outlined seems to be a worthy introduction to the medical sciences and to hospital orientation. More comprehensive sources of information should be included for such a course, however.

Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES. THEY DO NOT, HOWEVER, REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY. ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED. EVERY LETTER MUST CONTAIN THE WRITER'S NAME AND ADDRESS, BUT THESE WILL BE OMITTED ON REQUEST.

LATE EFFECTS OF FREEZING

To the Editor:—**A patient who froze both feet ten years ago has suffered from severe burning sensations in the feet both day and night for the past five years. It is more severe in hot weather. His feet never perspire. He wears shoes which are freely ventilated. Are there any similar cases on record? Has any remedy for relief been successful?**

Alexander Kremers, M.D., Kaukauna, Wis.

ANSWER.—Frost bite, like "trench foot" and "immersion foot," often produces fibrosis of the subcutaneous tissues. When the thermal injury is severe the scarring involves the more superficial muscles, blood vessels and nerves. In these circumstances there are likely to be permanent contractures of the toes, weakness of the supporting structures and atrophy of the skin. Loss of sweating in a patient like this suggests permanent damage to the sympathetic nerves to the sweat glands. The burning pain, which is the chief complaint, is probably caused by incomplete recovery of the cutaneous sensory nerves. Hypersensitive skin and burning pain in cases of partial nerve damage are most difficult lesions to treat. No satisfactory form of medication has been found for treating these injuries due to cold in this war. In the occasional case complicated by a poor peripheral circulation, sympathectomy may be of help by increasing the blood flow. In a patient who froze his feet ten years ago and has suffered severely for only the past five years, if he is past middle age the condition may be secondary to superimposed occlusive vascular disease. Diagnostic procaine block of the lumbar sympathetic ganglions should certainly be tried, to be followed by ganglionectomy if there is a favorable response.

AMINOPHYLLINE IN HEART DISEASE

To the Editor:—**Please indicate the use of aminophylline by injection for uncomplicated hypertensive cardiovascular disease. Is its use by injection once or twice a week to be recommended in persons over 60 years of age as a routine procedure?**

M.D., New York.

ANSWER.—Aminophylline has been used extensively in the treatment of disease of the coronary arteries complicating hypertension, but its value as an agent for dilating the coronary arteries has been questioned. This subject was well reviewed by N. H. Boyer in THE JOURNAL, May 29, 1943, page 306. Its routine use for persons over 60 years of age is not recommended.

SACCHARIN IN DIABETES

To the Editor:—**Is it permissible for one suffering from diabetes mellitus to use saccharin? Will saccharin raise the blood sugar level or cause sugar to appear in the urine?**

D. R. Martin, M.D., Carrollton, Ill.

ANSWER.—It is permissible for a diabetic patient to use saccharin. It will not raise the blood sugar level or cause sugar to appear in the urine. It will not hurt the heart or the eyes of a diabetic patient.

DIMETHYL AND DIBUTYL PHTHALATE AND GLYCEROL TRIACETATE

To the Editor:—**Are there any ill effects from inhaling dimethyl phthalate, dibutyl phthalate and glycerol triacetate or getting these on the hands? A patient complains chiefly of dyspnea and a feeling that he is going to faint.**

Harry M. Salzer, M.D., Cincinnati.

ANSWER.—Information as to toxic properties of the phthalates is scanty. More is known about di(2-ethylhexyl) phthalate and dibutyl phthalate than about dimethyl phthalate, $(C_6H_4(COOCH_3)_2)$, which contains methyl alcohol 33 per cent and phthalic anhydride 76.17 per cent. The dibutyl form is believed to be much more toxic than the diethyl, and the dimethyl is probably not less toxic than the diethyl. Shaffer, Carpenter and Smyth (*J. Indust. Hyg. & Toxicol.* **27**:130 [May] 1945) discuss the toxicity of diethylhexyl phthalate, chiefly with reference to animals and limited to acute and subacute poisoning. Two adult human subjects swallowed single doses of 10 Gm. and 5 Gm. respectively. In the first instance this ingestion was accompanied by mild gastric disturbances and moderate catharsis. Some of the phthalate was recovered in the urine within twenty-four hours. This substance, while not acting as a skin irritant, apparently is freely absorbed through the skin, which thus may be a prime port of entry, since the high boiling point (295 C.) of this substance is not conducive to free evaporation and inhalation. The lethal dose by skin absorption in rabbits after skin application and ingestion appears to be near 25 cc. per kilogram of body weight. All rats inhaling a mist of dibutyl phthalate died after fifteen minutes' exposure; all rats inhaling a mist of diethyl (diethylhexyl) phthalate died after four hours. Diethyl phthalate applied directly to the eyes did not produce ill effects. These authors conclude that diethyl phthalate is a chemical of low toxicity and that such damage as arises is probably attributable to the alkyl rather than to the phthalate portion.

Glycerol triacetate is believed to constitute a severe skin irritant, since it contains approximately 83 per cent of acetic acid.

UTERINE BLEEDING FOLLOWING MENOPAUSE

To the Editor:—**A woman aged 57 passed the menopause at 49; she had no particular difficulty at that time. In May of 1941 a thorough checkup at a clinic indicated she had a chronic cholecystitis with stones, angina pectoris, toxic labyrinthitis, obesity and chronic nervous exhaustion. The electrocardiogram showed some evidence of cardiac damage, apparently on a sclerotic basis. The nervous exhaustion could be explained by the fact that she holds a demanding job and has an invalid husband who is dependent on her, not only for support, but for much of his physical care. By the summer of 1944 her heart condition appeared to have improved a good deal, and, because she was beginning to have more and more digestive trouble which was apparently due to the gallstones, cholecystectomy was performed. A short time following the removal of the gallbladder and while she was still in bed, she had a small amount of vaginal bleeding. In a few days she began to spot again, and this continued until March, with only brief periods of one to three days without any discharge. In March a diagnostic curettage revealed a menopausal type of endometrium with hemorrhage. Pelvic findings are within normal limits on bimanual examination Repeated examinations during the time of flow have always shown that the flow is from the cervix and that the vaginal mucosa is of normal appearance. Six weeks after the curettage she spotted lightly for two or three days, and six weeks later this was repeated. She has no discomfort at this time, with the exception of a mild bearing down sensation in the pelvis. Most of the time she feels quite well, although she has a mild arthritis which involves particularly the hands and the knees. What are the chances of a cancer developing in the uterus at this time or later?**

M.D., Nebraska.

ANSWER.—The diagnosis of uterine bleeding in a woman of 57 who had her menopause eight years previously is cancer until this condition is ruled out. True, in this case cancer has not been found on bimanual examination, on inspection of the cervix or on endometrial curettement. Occasionally a thorough curettage of the endometrium may be performed and a carcinoma overlooked. Such a cancer, a small one, may exist in the cervical canal and not be detected unless the curet is used carefully and systematically on the endocervix as well as on the endometrium. A small carcinoma in the corpus may also be missed on curettement. Furthermore, the patient may have a cancer in the oviducts or in one or both ovaries. In such instances the endometrium would be normal. In the presence of a granulosa cell tumor of the ovary the endometrium is usually hyperplastic.

The occurrence of the bleeding following shortly after the cholecystectomy is almost certainly accidental. This woman should have further surgery. If the operator is experienced in vaginal work he may do a vaginal hysterectomy with removal of both tubes and ovaries. If vaginal surgery cannot be done for one reason or another, a laparotomy should be performed and the uterus and adnexa removed. Even though the ovaries may not be felt on bimanual examination, one or both may contain a neoplastic growth.

SIGNIFICANCE OF LOW BASAL METABOLIC RATE

To the Editor:—**With reference to the answer to Dr. Bakke's question in the Aug. 18, 1945 issue of The Journal, page 1194, I think the following additional comments might be in order. In so-called pituitary deficiency, in which the basal metabolic rate is depressed, it is frequently found that the administration of thyroid extract is dangerous, since severe and at times critical attacks of hypoglycemia may be produced. Such cases respond well to testosterone or adrenal cortex extract. It is likely that in such cases the low basal metabolic rate is due not to hypothyroidism but rather to a low fundamental metabolism of the tissues themselves. It is for that reason, and also because the glycogen storage in the liver is low, that thyroid extract must be given with extreme caution. A determination of the blood cholesterol and of the sugar tolerance curve is helpful in deciding whether it is safe and desirable to administer thyroid extract.**

William Wolf,* M.D., New York.